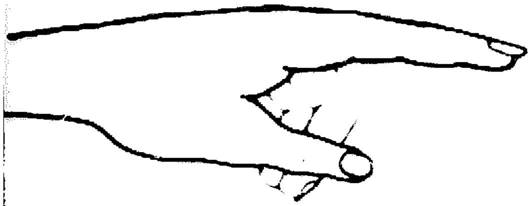
Communicating with Pictures in Nepal

by: Diana Fussell and Ane Haaland

Published by:
National Development Service, Tribhuvan University/
United Nations Children's Fund
Kathmandu, Nepal

Available from:
United Nations Children's Fund
Lazimpat
P.O. Box 1187
Kathmandu, Nepal



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Report of a study by NDS and UNICEF

Kathmandu 1976

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National Development Service, Tribhuvan University, Kirtipur Campus, Kathmandu, Nepal.

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INTRODUCTION

As a part of their University course, all degree level students in Nepal are required to serve for one academic year with the National Development Service (NDS) living in rural areas and helping with village-level development work. As well as teaching in schools, they undertake a wide range of projects in such fields as conservation and reforestation, family welfare work, health education, literacy teaching, agricultural extension, water supply improvement and simple construction work.

In 1975 the NDS, in cooperation with various Government Departments, UNICEF and others, produced a number of booklets on topics related to village development, e.g. reforestation, nutrition, sanitation, etc

These booklets were primarily intended for use by the University students serving with the NDS and by other fairly highly educated people such as Government extension workers However, it was hoped that some villagers, with very much less schooling, might make direct use of the booklets.

But most adult Nepalese villagers cannot read at all. Would it be possible to produce village development booklets which communicated entirely through pictures? If so, what kind of pictures would be the most effective?

This study grew out of attempts to find answers to these questions. The main findings of the study have been used as the basis of a handbook for extension workers - *Communicating with Pictures* - which gives practical advice on what kind of visual aids are most effective

The handbook is available in Nepali or English from UNICEF, P.O. Box 1187, Kathmandu, Nepal and from Dr. T.R. Vaidya, Director, NDS, Kirtipur Campus, Tribhuvan University, Kathmandu, Nepal.

ACKNOWLEDGEMENTS

In designing and carrying out this study, we have had help and advice from a considerable number of people, in particular Al Dieffenbach of the New ERA research group, Kathmandu, Hem Hamal of the Information, Education and Communication Division, Family Planning/MCH Project, Ministry of Health, Nepal, B B Chitrakar, Chief of Writers and Production Division, Janak Educational Materials Centre, Nepal, and D. Campbell of the Agricultural Extension and Rural Development Centre, Reading University, England.

We ourselves, however, accept the responsibility for any shortcomings in the study itself or in this report

The following people contributed to the training and preparation of the interviewing teams

Dr. P P Timilsina, then Director of the NDS
Dr. B.P Uprety, then of the Institute of Nepal and Asian Studies
Mr. Keshab Mathema, then Programme Officer of UNICEF, Kathmandu
Mr. Trailokya Man Singh Shrestha of New ERA
Mr. Laxmi Bahadur Nakarmi
Mr. Sharad Kishore Lacoul

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Kathmandu, 1976

BACKGROUND

Nepal is a small country, but in its development it faces some of the biggest challenges in the world. In less than 200 km from South to North, the terrain rises from the tropical heat of the Northern Ganges plain only 200m above sea level, through hills and valleys to the highest peaks in the world - the Himalayas - and the thousands of steep ridges and deep valleys make transport and communications very difficult indeed.

Only 10 - 15% of the country is accessible from roads, and in the least developed parts villagers have to walk up to three weeks to reach the nearest road. The monsoon climate makes it difficult, and sometimes impossible to travel about the country: rivers rise rapidly, bridges and trails are washed away, and landslides make life dangerous.

The 12 million inhabitants comprise more than 20 major ethnic groups and speak more than 30 different languages. Although the Nepali language is spoken by more than 50% of the people, in some rural areas it is difficult to find people who speak it (interviewers involved in this study had to use interpreters for at least some interviews in 11 of the 18 villages they went to). Thus, communicating with villagers is a particularly difficult problem for development workers in Nepal.

To add to the problem, only about 12.5% of people aged 15 or over are literate (according to the 1971 report of the Census Department).

So understandably, the idea of using pictures to communicate with villagers is a particularly attractive one.

OUTLINE

The study had three sections:

PART A: Style - An attempt to find out how successful each of six picture-styles was in communicating its subject matter to unschooled adult villagers in rural Nepal (See page 9).

PART B: Messages - An attempt to find out whether pictures were communicating the messages intended by their artists, and if not, why not. This part also tested some additional stylised drawings (See page 21).

PART C: Colour - An attempt to find out what meanings were attached to various colours (See page 39).

The study was carried out in three stages - the first two near Kathmandu and the final stage in a number of widely separated parts of Nepal. (See pages 4-7).

LIMITATIONS

The study was designed to gather information which would be directly useful for people producing visual materials in countries like Nepal. The more complex the design of the study, the greater the chances of inaccuracies and confusion in the data produced. We therefore tried to resist the temptation to complicate the study by introducing elements which would produce information which was just interesting rather than useful.

We tested only pictures which were actually likely to be considered for use in booklets or posters produced on a large scale, or in materials made on the spot by village-level workers. This eliminated, for example, such things as full-colour photographs. It might be interesting to know how successful these are in communicating with unschooled villagers. But this would not be a useful piece of information, because it is difficult and very expensive to print full-colour photographs in Nepal, and the cost and difficulty of such a process rule it out for large-scale production of village development materials.

Similarly, it might have been interesting to test our pictures with villagers of varying levels of schooling, as well as with unschooled villagers, but we were not convinced that this would be a useful line of investigation. We were, after all, trying to find ways of communicating with villagers who had never been to school, as the majority of adult Nepalese villagers have not. We felt it safe to assume that pictures which succeeded in communicating with unschooled villagers would also succeed with those who had been to school, i.e. the aim was to tackle the most difficult task of communication. Results from this should be useful as guides to communication with people with more schooling, but not vice versa.

The study did not attempt to go into the question of whether messages transmitted by means of pictures were actually likely to influence the behaviour of villagers. It simply aimed to find out whether villagers saw what the artists had intended to convey.

We hope others will be able to use the results of this simple study as a basis for gathering further information on how ideas can be communicated to unschooled villagers.

THREE STAGES

The study was carried out in three stages. The first two stages were used not only for pre-testing the materials and techniques, but also for selecting and training the interviewers. The final stage produced the results which are presented in detail in this report.

First Stage

Eight potential interviewers were divided into three teams, and to each team was attached a person who had previous research experience with the New ERA research group.

These small teams spent three days in villages which were near the Kathmandu Valley, but four hours walk or more away from any road. They were deliberately not given precise instructions on interviewing procedure but were simply asked to take 152 pictures and 16 colour cards to the villages and see what sort of reaction they got. (The 152 pictures, which were divided into eight "books", consisted of 18 pictures in each of six different picture-styles, and 44 pictures intended to convey various ideas, concepts and instructions.) In particular, they were asked to try to find out what seemed to be the best way of explaining the study to village officials and villagers, whether it was difficult to get villagers to comment on the pictures, whether there were problems with such things as spectators "helping" or distracting the villager who was commenting on the pictures, what form of question seemed legitimate and effective, what range of comments was produced by the various pictures, whether it was possible to get villagers to explain why they interpreted a given picture in the way they did, and whether it was possible to get any of the villagers to draw their own pictures to convey ideas and information.

The interviewers were particularly asked to take note of any religious pictures to be seen in the villages as it was felt that symbols and conventions used in these pictures might possibly be adapted for use in conveying development messages to unschooled villagers. However, religious pictures were no more commonly seen than any other kind of picture, and this line of investigation was not pursued. In any case, even if religious symbols were widely recognised by villagers, one would expect to encounter some difficulties in adapting them for non-religious use on a national scale because of their specifically religious connotations, and because there are several major religions - and schools of religious art - in Nepal.

When the teams came back from the villages their experiences were discussed and used to modify the test materials. (Some pictures were modified, some kept the same, some added, and some dropped entirely (see Appendix 2). Their experience was also used to formulate techniques for presenting the pictures to villagers and for recording their answers.

Second Stage

This was intended to be a trial run for the final stage of the study. The three 2-man interviewing teams spent six days in villages within a days's travel outside the Kathmandu Valley.

This time they were not accompanied by the training leaders, and they were required to follow interviewing procedures laid down for them.

When they returned, some changes were made in the materials (see Appendix 2) but the procedures used were left virtually unchanged, as they seemed to have worked reasonably well.

Final stage

This stage lasted about five weeks. During this period one team went to the Far Western zone of Nepal, one to the West and Central zones, and the third team to the Eastern zone. Each team carried out a total of about 400 interviews, in the plains, hills and mountain areas of their allotted areas.

LOCATION

The differences in language, background and culture from one part of Nepal to the other means that information about the success or failure of certain pictures in just one or two areas would probably not be acceptable as a basis for producing visual material for the country as a whole. Therefore the study took place in several widely separated and carefully selected parts of Nepal.

Before leaving Kathmandu, the interviewers were told what area to go to and what group of people (usually a particular ethnic group) to concentrate on when they arrived in the specified district. They consulted with local officials to identify appropriate villages in which to conduct their interviews, according to the following criteria:

- the villages were to be some hours walk away from main trade routes and bazaars. police posts etc.
- the villages should contain a high proportion of people of the group (usually an ethnic group) the interviewers had been asked to concentrate on.
- the villages should not have had much contact with the outside world (through other survey teams, trekkers, travel by inhabitants etc).
- the villages should contain a high proportion of people who had never been to school.

However, the interviewers were not expected to seek out unusually remote villages.

THE VILLAGES

The interviewers were asked to fill in an information sheet on each village involved in the final stage of the study. These information sheets provide a general picture of the villages, but they were not meant to provide highly accurate or detailed information. In fact, interviewers were told that if villagers seemed unwilling to provide any particular piece of information, they should not pursue the question, as the disadvantages of appearing to be conducting some kind of inspection, and thus making villagers feel uneasy, would outweigh the advantage of slightly more accurate information about the villages. The village information sheets concentrated on recording:

- how remote the villages were
- the level of prosperity of the villages
- what pictures were to be seen in the villages
- how willing villagers were to help with the study
- if there was a school in the village

By Nepalese standards, the 18 villages where the final stage of the study was conducted were not extremely remote, although they would be considered very remote in many other countries. None of them were accessible by road. Four villages were within four hours' walk of a trade route (i.e. a main foot track) or main bazaar, and the rest were between 4 and 24 hours walk away.

The villages visited in the East were larger than those visited in the Far West, West and Centre, and many more pictures were on view in the villages in the East - a factor which may well have had an effect on the results of the study.

Far West

In the Far West, all the five villages involved in the study had primary schools (up to grade 3) and two had lower secondary schools (to grade 7). Girls made up about 3% of the school population. Food shortages were experienced every year in all villages. In one village in the North many people were affected by iodine deficiency and had goitre and/or were deaf, dumb, or mentally retarded. The interviewers saw no pictures in any of the villages. The interviewers found villagers in two villages very willing to cooperate in the study, in two they were moderately so, and in one they were unwilling.

West/Central

In the West/Central section, all seven villages involved had primary schools and one had a lower secondary school. 36% of the school children were girls. Two villages sometimes had food shortages. A few pictures - of H.M. King Birendra and of Gods - were seen in the villages. Villagers in four of the villages were classified as very cooperative with the study, in two, moderately so, and in one, unwilling.

East

In the East, all six villages involved had primary schools and one had a lower secondary school. Girls were 25% of the school population. Four villages sometimes had food shortages. Pictures from magazines were used as decorations in schools and tea stalls in all the villages. In addition, maps, agricultural posters and family planning posters were seen in two villages. The interviewers found villagers in two of the villages very cooperative and in the other four moderately so.

THE RESPONDENTS

Care was taken to avoid undue concentration on any one ethnic group, but no attempt was made to exactly match the proportions of the various groups which are found in the population of Nepal. The villages visited and the groups interviewed in the final stage of the study are shown in the following table:

	District	Village	Main group interviewed	Subjects as percentage of total
Far West	1. Mugu	Pina Kotilla	Thakuri	5%
	2. Achham	Batula Kalakanda	Brahmin Chhetri	8% 15% (Chhetri, Achham and Dailekh)
	3. Dailekh	Chhepari	Chhetri	
	4. Banke	Katkuiya	Muslim	5%
West/Central	5. Mustang	Jharkot Kagbeny	Bhote	7%

	District	Village	Main group interviewed	Subjects as percentage of total
West/Central	6. Myagdi	Muna Mudi	Magar	9%
	7. Parbat	Durlung Chanauty Durlung Kafalchaur	Gurung	8%
	8. Dhanusha	Shakhuwa	Maithili	7%
East	9. Taplejung	Dokhu Nangkhalyang	Limbu	13%
	10. Illam	Solubung Maimajuwa	Rai	12%
	11. Sunsari	Madheli Ekamba	Tharu	11%

Just over 400 people took part in each of the three sections of the study (i.e. style, messages, colours), but it was fairly unusual for any one person to do all three sections. In the West/Central and Eastern villages, it was relatively easy to find willing subjects, so villagers often did only one section. In the Far West, however, people were more reluctant to take part in the study, so once the interviewers had gone through the task of persuading someone to respond to the pictures, they would encourage him/her to continue with more than one section.

However, the breakdown of subjects by age and sex was approximately the same for all three sections.

Breakdown of respondents according to age and sex
(approximate percentages of total)

Age	Men	Women	Total
18-29	21%	18%	39%
30-39	13%	12%	25%
40-49	17%	12%	29%
50 and over	6%	1%	7%
	57%	43%	100%

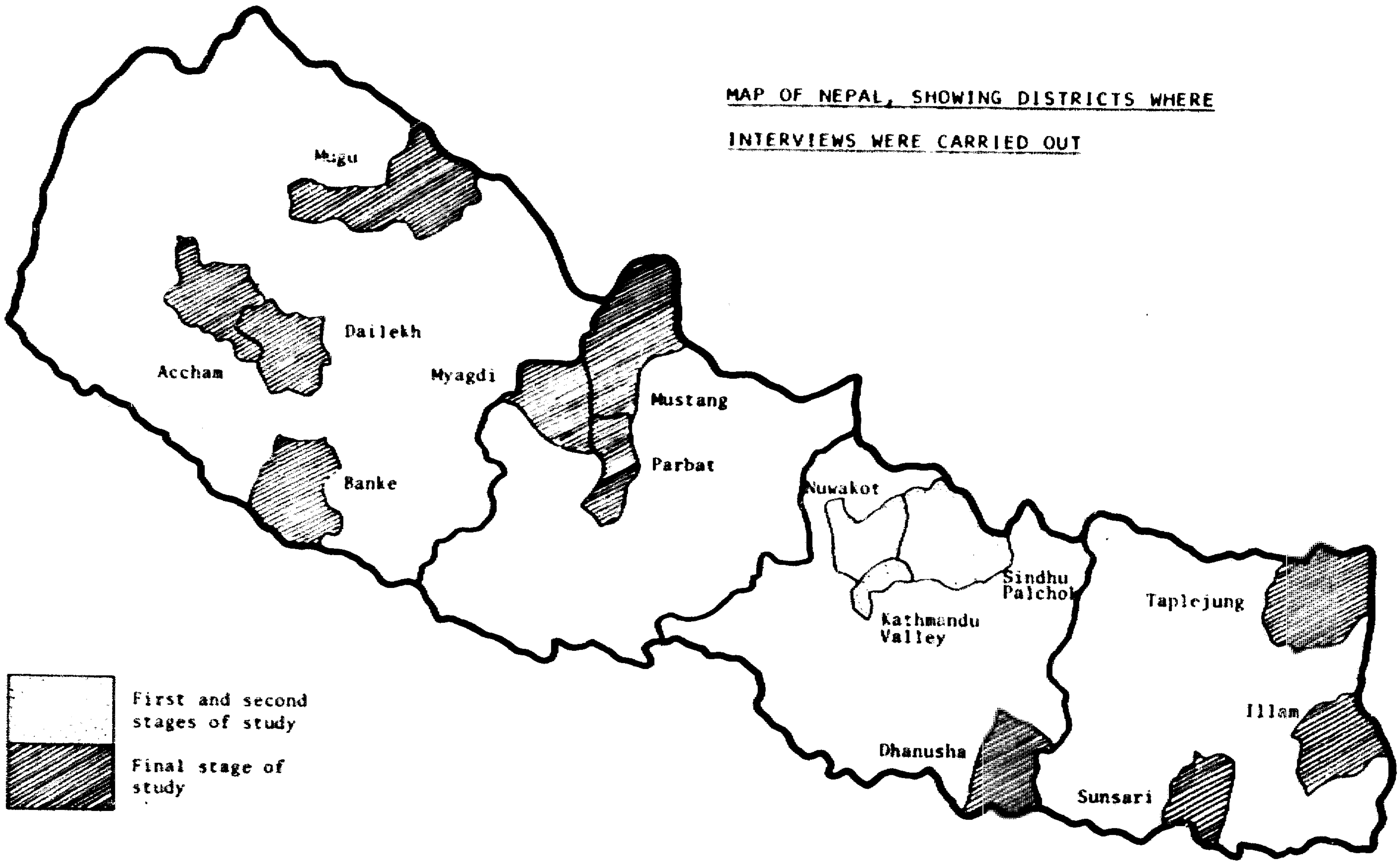
None of the respondents had ever been to school.

THE INTERVIEWERS

The six interviewers who took the pictures to the villages for the final stage of the study were all male, all Nepalese, and all University graduates or near graduates.

If any women had presented themselves as potential interviewers they would have been given very serious consideration, particularly as it was thought that male interviewers might have difficulties in getting women in the villages to comment on the pictures. However, female interviewers trekking through the villages would have been such an unusual phenomenon that they might well have had trouble in getting cooperation from men or women. Anyway, not surprisingly,

MAP OF NEPAL, SHOWING DISTRICTS WHERE INTERVIEWS WERE CARRIED OUT



no women applied to work as interviewers, and in fact the male interviewers managed to get a satisfactory number of female respondents (43%) in spite of some problems in the Far West.

Interviewers with less schooling would have been eligible - in fact people with something less than a University education might have been less intimidating for the villagers. However, once again, the possibility did not arise. Only one person without university education applied to do the work of interviewing and, as it happened, he was not among the six chosen.

TRAINING AND PREPARATION OF INTERVIEWERS

It was assumed that the more the interviewers understood and were interested in the basic aims of the study, the more reliable and valuable results they were likely to produce. So they helped as much as possible with preparation of the study materials, and joined in discussions of materials, techniques, recording methods, etc.

The more formal part of their preparation included discussions with people qualified to advise them on research techniques and on how to deal with the various situations they might be expected to encounter in the villages. A considerable amount of time was spent in role-playing interviews not only with various kinds of villager (nervous, over-enthusiastic, etc.) but also with the local officials whose cooperation they would need if they were to carry out the study. The preparation also included two field trips, one with trainers and one without them.

GETTING THE COOPERATION OF VILLAGERS

As they trek up to a village, the interviewers meet three young women. Would they like to help by looking at the pictures? Some giggling and conferring. Then, "Only if you play us a tune on your mouth-organ", they say.

Three tunes later, one of the girls settles down and does give her comments on a full set of pictures. Then her friends insist on being interviewed too, but they have been watching the first interview closely and their answers are obviously influenced by it.

An enjoyable couple of hours have gone by, but only one usable interview has resulted.

In fact quite a large part of the interviewers' time and effort was spent not on showing the pictures to villagers, but in explaining what they were doing and getting the villagers to cooperate.

The interviewers carried letters from the NDS Directorate explaining the purpose of the study. In each district they went to, they visited the District Education Officer and often obtained an additional letter from him to village leaders. Their first task in each village was to explain the study to the village head and get his permission and help. In some villages, where the majority of the villagers did not speak Nepali and the interviewers did not speak the local language, an interpreter had to be found. But even in those villages where an interpreter was not necessary, the interviewers found it very useful to have some locally respected person (perhaps the school teacher) to accompany them as they went around the village.

None of this could be organised in a hurry, and a lot of time had to be spent in discussing the weather, the crops, and the interviewers' clothes and camping gear, offering cigarettes, drinking tea (and sometimes playing the mouth-organ) before the actual interviews could begin.

The interviewers tried to emphasize the fact that they were testing the pictures (to see if they were good ones) and not the villagers, but in spite of this it is certain that many of the villagers felt as if they were undergoing some kind of test of their intelligence. The interviewers reported that some village leaders felt that the reputation of their village would suffer if not many of the pictures were recognised, and their attempts to encourage respondents sometimes added to the tension of the situation. And the interpreters sometimes had to be restrained from "helping" the respondents.

The villagers themselves often made comments indicating their own expectation that people who had been to school or who had travelled would be most likely to understand the pictures. ("No, don't ask me - I've never been outside the village", "But I've never learned to read - what do you expect a blind man to see?")

INTERVIEWING ENVIRONMENT

As expected, the interviewers and their pictures attracted an enormous amount of interest in the villages. It did not seem realistic to insist on keeping spectators away from the interviews. Even if this had been possible, the effect would probably have been to make the subjects more nervous, and to make some (particularly women) refuse to help with the study.

So the interviews were almost always conducted in the middle of a bunch of friends and neighbours of the villager involved. In an attempt to reduce the detrimental effects of this on the study, villagers were told that if they wanted to take part they should not watch interviews before their own one, the more talkative bystanders were given colour cards or comic books to look at, and the interviewers recorded any prompting from the audience or other particularly distracting events (some of the interview records were later eliminated from the study on the basis of these notes).

RECORDING THE RESULTS

The interviewers worked in pairs throughout the study, one showing the pictures to the villagers while the other recorded what was said and noted the time taken (in the picture-style section of the study).

A number of recording systems were considered and the one which was finally chosen was to have the recorder write down all questions and answers as nearly verbatim as possible. In most cases the pace of the interview was slow enough for the recorder to keep up with it fairly easily. This method of course produced a large quantity of material which later had to be tabulated and analysed. However, it relieved the interviewers of the task of making snap decisions about what answers should count as "recognition" of a picture and about how to classify bizarre responses. It also made it possible to keep a check on what questions had been asked, and to eliminate some interviews or parts of interviews in cases where the interviewers had inadvertently prompted the villager or asked misleading questions.

All the answers were recorded in Nepali or (much less frequently) in the local language of the area involved.

PART A - PICTURE-STYLE

Aim

The aim of this part of the study was to find out whether the style of a picture made a difference to how recognizable the picture was.

Materials

Photographs were made of eighteen different subjects fairly commonly seen in Nepal (although Nepal is a country of such variety that eighteen pictures which would be equally familiar everywhere were not available). The number of subjects was reduced to twelve after the first stage of the study.

Each of these photographs was used as a basis for pictures in six different styles:

1. Ordinary photograph
2. Block-out (i.e. a photograph without any background)
3. 3-tone drawing (i.e. a drawing with shading and a good deal of internal detail)
4. Line drawing (with no attempt at shading)
5. Silhouette
6. Stylised drawing (i.e. stick drawing or other very simple drawing of the type that can be drawn by people with little artistic talent or training)

Four of these styles had been used by an interesting study carried out by Andreas Fuglesang in Zambia. The 3-tone drawing was added in this study because it seemed likely to have the advantages of a block-out photo ("realistic" representation, absence of distraction from the main subject), while avoiding all of the difficulties involved in reproduction of photographs.

The stylised drawing was also added because this is the style likely to be used by village-level workers (such as NDS participants) in making their own visual materials.

These pictures (each measuring about 17cm. by 13 cm.) were assembled in six "books". Each book contained pictures of all twelve subjects in the same order, but the styles were varied, as in the following table:

Composition Of Books

	Book A	Book B	Book C	Book D	Book E	Book F
Water-pot	Photo	Stylised	Silhouette	Line	3-tone	Block-out
Man carrying baskets	Block-out	Photo	Stylised	Silhouette	Line	3-tone
Sheep	3-tone	Block-out	Photo	Stylised	Silhouette	Line
Girl	Line	3-tone	Block-out	Photo	Stylised	Silhouette
Tree	Silhouette	Line	3-tone	Block-out	Photo	Stylised
Buffalo	Stylised	Silhouette	Line	3-tone	Block-out	Photo
Man digging	Photo	Stylised	Silhouette	Line	3-tone	Block-out
Mountain	Block-out	Photo	Stylised	Silhouette	Line	3-tone
Man ploughing	3-tone	Block-out	Photo	Stylised	Silhouette	Line
Bananas	Line	3-tone	Block-out	Photo	Stylised	Silhouette
Horse	Silhouette	Line	3-tone	Block-out	Photo	Stylised
Woman & Child	Stylised	Silhouette	Line	3-tone	Block-out	Photo

Method

Each villager who took part in this part of the study was shown only one of these six books (one picture at a time) and was asked to say what each picture represented.

Very often it was not necessary for the interviewer to ask any questions about the pictures - showing them to the villager was enough to stimulate a response.

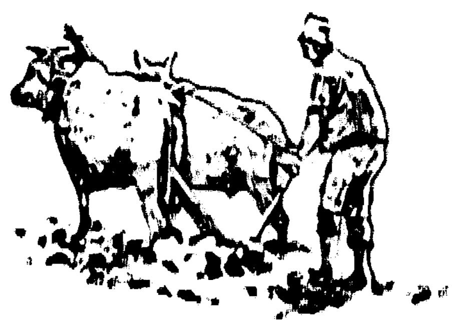
However, the interviewers were free to ask such questions as "What is this?" "Anything else?" "What is he doing?"(if the villager simply said "man" or "person" for the picture of the man digging). If a villager give two answers, (e.g. "This is a sheep or a man"), the interviewers asked for a clarification ("Which do you think it is meant to be?").

All questions and answers were recorded on an answer sheet, along with some information about each respondent. The interviewers tried to avoid signalling their opinion of the responses given (either by words or through their facial expressions etc). Each book was used about the same number of times in each village visited. Altogether, 406 villagers took part in this section of the study (67, 68 or 69 villagers responded to each of the six books used).

Analysis (following the interviewers' return to Kathmandu)

A decision was made as to what answers should be counted as a "recognition" of the subject of the picture. Two of the pictures (of the man carrying baskets and of the man ploughing) produced such a wide variety of responses that it was very doubtful where one should draw the line between "recognition" and "non-recognition".





The picture of the man carrying baskets turned out to have been a bad choice for the study, as this way of carrying loads is extremely common in some parts of Nepal, but completely unknown in other parts. Some of the villagers who had not seen this way of carrying a load suggested that the man was carrying a balance, or a weapon, or simply said "don't know".

The picture of the man ploughing elicited a large number of borderline responses such as "person and animal","person and cow", "person in field", "man working".

Rather than arbitrarily call some of these responses "recognition" and others "non-recognition",it was decided to eliminate these pictures from the study before any scoring of results was done. The ten remaining pictures produced responses which were much easier to classify as "recognition" or "non-recognition".

The number of "recognitions" scored by each picture was recorded and converted into a percentage.

RESULTS

The following pages show recognition of the remaining ten pictures in the form of a percentage for each picture style.



recognised by 28%

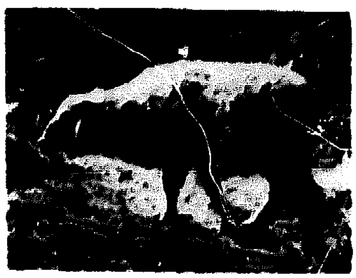


recognised by 48%

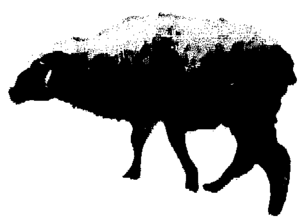


recognised by 94%

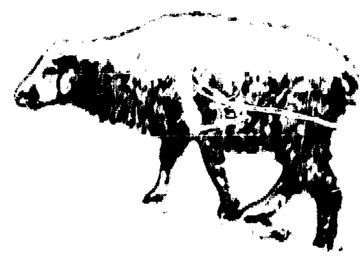
Answers counted as recognition: Water-pot, Pot



recognised by 29%



recognised by 51%



recognised by 53%

Answer counted as recognition: Sheep



recognised by 82%

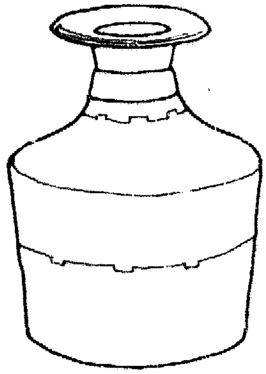


recognised by 70%

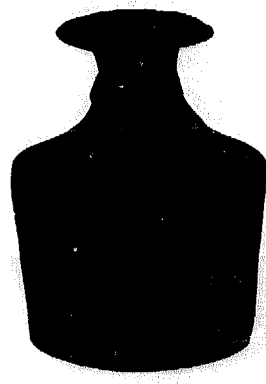


recognised by 85%

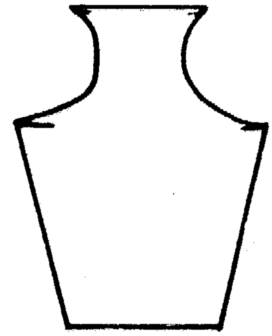
Answers counted as recognition: Girl
Woman
Person



recognised by 91%



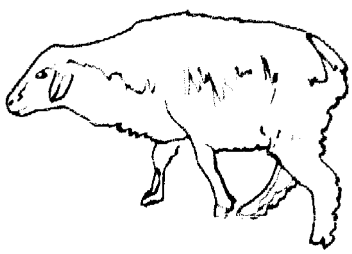
recognised by 88%



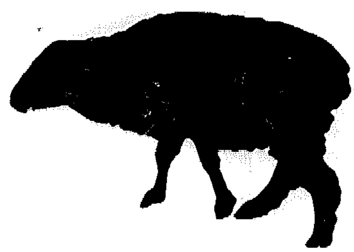
recognised by 75%

Other answers given (in order of frequency):

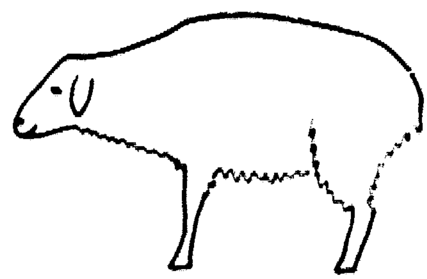
Don't know
Broken water-pot
Person



recognised by 55%



recognised by 43%



recognised by 49%

Other answers given: (in order of frequency)

Don't know	Pig	Buffalo	Camel
Cow	Horse	Forest	Boar
Elephant	Bear	Animal	Ox
Goat	Tiger	Mouse	



recognised by 72%



recognised by 53%



recognised by 68%

Other answers given (in order of frequency)

Don't know
God
Monster

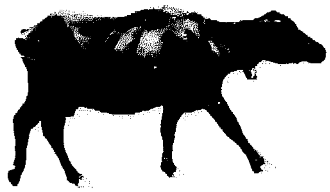
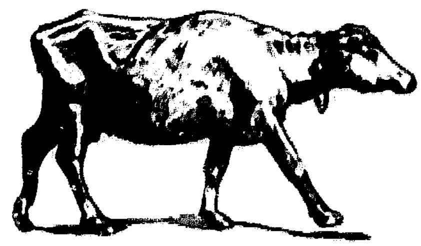
Man
Something black

Answers given by less than 1% of the respondents are not included in this table

recognised by 81% recognised by 79% recognised by 79%

Answer counted as recognition: Tree (or any specific variety of large tree)

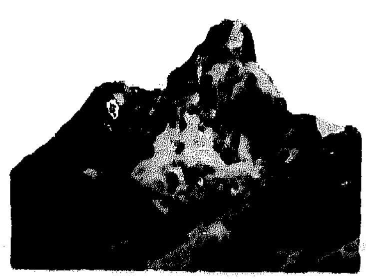
recognised by 62% recognised by 61% recognised by 69%

Answer counted as recognition: Buffalo

recognised by 38% recognised by 62% recognised by 51%

Answers counted as recognition: Man (or person) digging (or working, or holding digging tool)

recognised by 53% recognised by 49% recognised by 56%

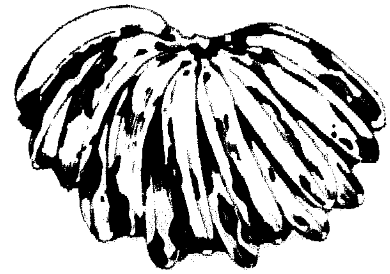
Answers counted as recognition: Mountain, hill (or name of individual mountain)



recognised by 64%

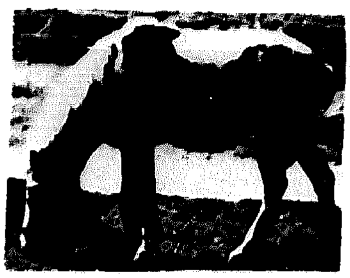


recognised by 64%

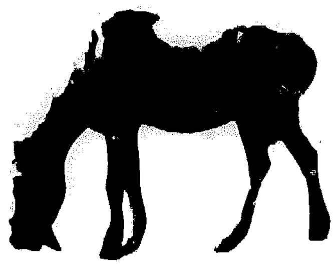


recognised by 57%

Answer counted as recognition: **Bananas**



recognised by 79%



recognised by 92%



recognised by 88%

Answers counted as recognition: **Horse**
Ass



recognised by 75%



recognised by 86%



recognised by 88%

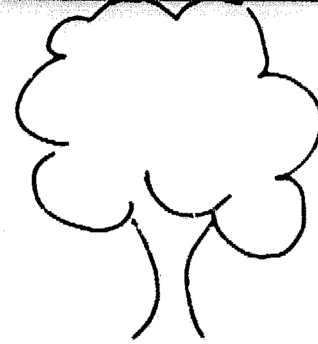
Answers counted as recognition: Woman (or mother, or person) with child (or baby)



recognised by 68%

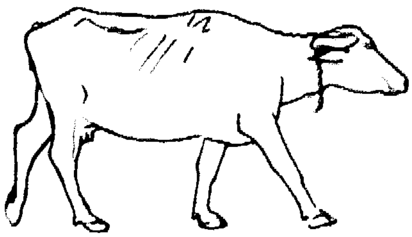


recognised by 81%

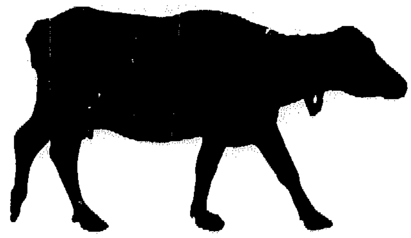


recognised by 21%

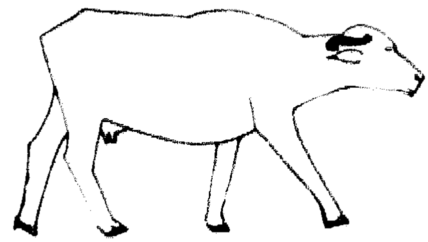
Other answers given (in order of frequency): Flower
Don't know
Plant



recognised by 43%

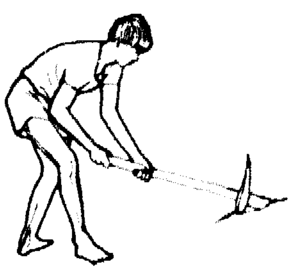


recognised by 51%



recognised by 25%

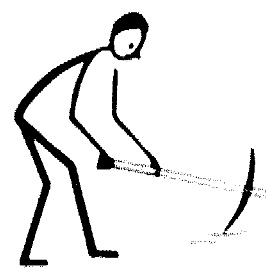
Other answers given (in order of frequency): Cow, Horse, Elephant, Ox, Don't know



recognised by 49%

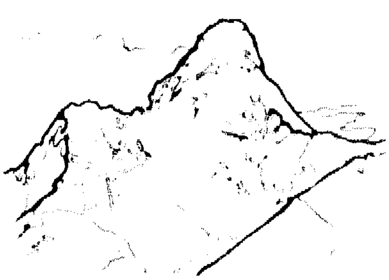


recognised by 47%

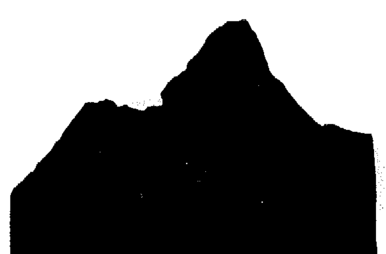


recognised by 47%

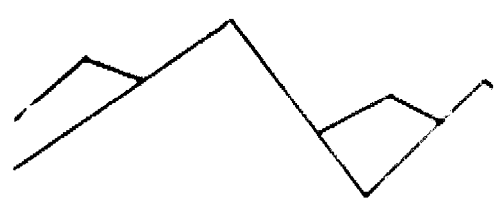
Other answers given (in order of frequency):
Person and weapon
Don't know
Person
Person ploughing
Person and non-digging tool
Person holding something
Devil



recognised by 28%



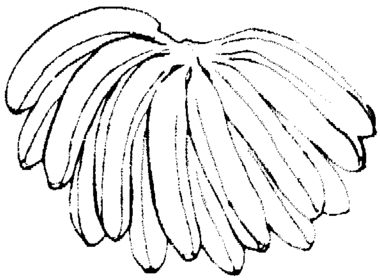
recognised by 48%



recognised by 16%

Other answers given (in order of frequency): Don't know, Forest, Map, House, Temple, Cloud, Tree, Lines, Flower

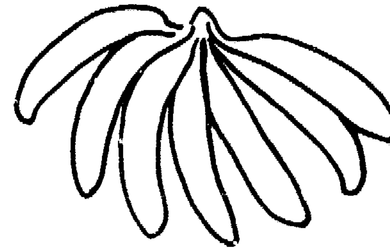
Answers given by less than 1% of respondents are not included in this table



recognised by 59%



recognised by 66%

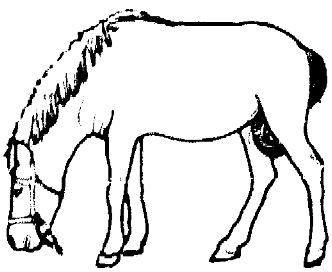


recognised by 46%

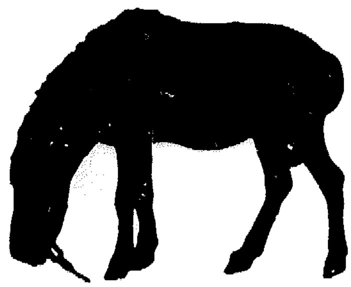
Other answers given (in order of frequency):

Flower
Don't know
Plant

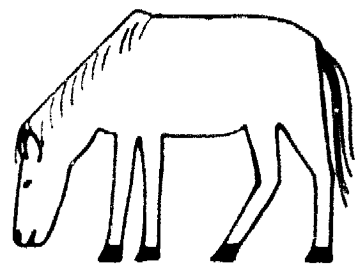
Hand (or fingers)
Fruit



recognised by 81%



recognised by 69%



recognised by 79%

Other answers given (in order of frequency):

Don't know
Camel
Elephant
Cow



recognised by 72%



recognised by 65%



recognised by 60%

Other answers given (in order of frequency):

Don't know
Man
Person

Two people
Person sitting
Person carrying load

Answers given by less than 1% of the respondents are not included in this table

The relative effectiveness of the picture styles is summarised in the following table (Most effective = 1, Least effective = 6)

	Photo	Block-out	3-tone	Line	Silhouette	Stylised
Water-pot	6	5	1	2	3	4
Sheep	6	3	2	1	5	4
Girl	2	3	1	4	5	6
Tree	1=	3=	3=	5	1=	6
Buffalo	2	3	1	5	4	6
Man digging	6	1	2	3	4=	4=
Mountain	2	3	1	5	4	6
Bananas	2=	2=	5	4	1	6
Horse	4=	1	2	3	6	4=
Woman & Child	3	1	2	4	5	6

For all pictures combined, the six picture styles produced the following percentages of recognitions:

3-tone	72%
Block-out	67%
Line drawing	62%
Silhouette	61%
Photo	59%
Stylised drawing	49%

Comments

It is not surprising that the 3-tone and the block-out were the most effective styles. They both give as much visual information as possible about the subject of the picture, and eliminate surrounding details which could be distracting. The superiority of the 3-tone when compared to the block-out is presumably due to the 3-tone's greater sharpness and clarity.

Between them, these two styles produced the most effective picture in 7 out of 10 cases (3-tone four times and the block-out three times). And every one of the 3-tone pictures was recognised by more than half of the people who looked at it. (As a matter of comparison, in Fuglesang's picture-style study, which did not use 3-tone pictures or stylised drawings, the block-out style was preferred in 57% of his cases).

In some cases, there was very little difference between the effectiveness of the ordinary photograph and the block-out. These were cases in which there was very little background anyway (because the subject was clearly outlined against the sky or other fairly neutral background). In other cases, however, cutting away the background made a remarkable difference to the effectiveness of the pictures. Sometimes eliminating the background removed pictures of objects and people which could distract the villagers' attention from the main subject (as in the pictures of the man digging and of the woman and child). Sometimes, as

in the pictures of the water-pot, the sheep and the horse, cutting away the background helped to define the outline of the main subject, which otherwise tended to merge into the background.

One might say that a block-out is no more effective than a really first class photograph. However, it is much easier to make a block-out than it is to take a "really first class photograph".

If one compares the different styles of drawing, it is apparent that the more detailed and "realistic" a drawing is, the better chance it has of being recognised.

It is worth noting that the shading technique used in the 3-tone drawings is not actually realistic. Shadows on real objects do not appear as criss-crossed lines, but even so, the cross-hatching has made a considerable difference to the effectiveness of the drawings.

The "stylised" drawings varied considerably in their degree of stylisation. The two lowest-scoring drawings (the mountain and the tree) were not so much simplified drawings as symbolic representations of their subject.

Comparison of Results from Different Groups

The table below gives an analysis of the results of this part of the study according to the various groups of people who took part.

	Group	Average no. of pictures recognised by each respondent (maximum = 10)	Relative success of picture-styles used (Most successful style = 1 Least successful style = 6)					
			Photo	Block-out	3-tone	Line	Silhou-ette	Stylised
Far West	Thakuri	4.6	5	2	1	3=	3=	6
	Brahmin	4.7	6	3	1	4	2	5
	Chhetri	4.0	5	3	2	4	1	6
	Muslim	5.0	3	5	1	6	2	4
West/Central	Bhote	7.5	4	1	2=	2=	5	6
	Magar	6.2	3=	1=	1=	3=	5	6
	Gurung	7.8	6	3	1	4	2	5
	Maithili	7.2	3=	2	1	3=	3=	6
East	Limbu	7.3	4	3	1	2	6	5
	Rai	7.1	2=	2=	1	4	5	6
	Tharu	6.5	5	2	1	4	3	6

Regardless of differences in the total number of pictures recognised by the various groups, the 3-tone is consistently the most effective style (and the block-out is consistently more effective than the photograph with background).

There are a number of possible reasons for the comparatively small number of pictures which conveyed their meaning to the groups in the Far West. One cannot entirely rule out the possibility that the results were affected by the personality and approach of the interviewers. However, this is not very likely as the interviewers who worked in the Far West had shown during training that they were particularly good at establishing rapport with nervous or initially unwilling respondents. The low scores in the Far West probably have more to do with the

fact that this area is more remote, less developed, less visited by outsiders, and that the people there are just less used to seeing pictures of any kind.

Times

The data-collectors recorded the time taken for each answer in this section of the study. Given the difficult and varied circumstances in which the study was carried out, the times are not likely to have been recorded with great accuracy, but they do provide some interesting indications.

First of all, the length of time that villagers were prepared to spend on each picture came as something of a surprise. A few people gave their answers in a second or so, but times of 20 seconds or more were not uncommon. (One interview, involving the showing of ten pictures, took an hour and a half to complete.)

Overall, villagers who correctly recognised pictures in this part of the study took an average of 7.9 seconds to do so. Regional differences can be seen once again:

Area	Average time taken to recognise picture
Far West	10.5 seconds
West/Central	6.5 seconds
East	7.7 seconds
Nepal	7,9 seconds

The style of a picture did not seem to make much difference to the speed of recognition. Differences in speed seem to be related more to the subject-matter of the picture (see following table). Separate analysis of times in interviews using interpreters and interviews carried out without interpreters did not affect the pattern seen here

Average Time for Recognition of Pictures (in seconds)

Note: Answers which were not counted as "recognition" have been ignored in this table. For example, 19 people recognised the photograph of the water-pot, and those 19 took an average of 9.2 seconds to do so. Thirty-two people recognised the block-out picture of the water-pot, and those 32 people took an average of 10.3 seconds to do so.

	Photo	Block-out	3-Tone	Line	Silhouette	Stylised	All styles combined
Water-pot	9.2	10.3	7.5	8.4	6.8	10.6	8.8
Sheep	8.5	8.0	7.1	5.8	8.9	5.4	7.3
Girl	14.3	14.0	14.2	13.4	11.3	15.2	13.7
Tree	5.1	4.1	5.1	5.8	5.7	5.3	5.2
Buffalo	7.2	7.3	6.4	7.0	7.9	7.2	7.2
Man digging	12.5	10.3	9.5	8.7	8.5	9.6	9.9
Mountain	6.1	7.1	8.4	7.2	5.3	13.2	7.9
Bananas	6.6	3.9	5.2	4.1	4.1	3.6	4.6
Horse	5.4	5.6	4.1	4.5	5.5	6.6	5.3
Mother & child	9.2	11.3	10.1	9.7	8.7	9.1	9.7
All subjects combined	8.2	8.2	7.8	7.6	7.1	8.8	

PART B - ADDITIONAL STYLISED DRAWINGS, CONCEPTS, MESSAGES

Note For the purposes of discussion, the pictures in this section have been re arranged into groups of drawings of similar style or purpose. However, the pictures were not divided into these groups when they were presented to the villagers (see Appendix 1).

The following analysis gives the more common responses in the form of a percentage of the 410 villagers who took part in this section of the study. In some cases a single response appears under two headings: e.g. if a villager said "Someone drinking from a pipe" in response to the "Drink Boiled Water" picture (page 35) this answer would appear under "Person drinking something" and also under "Mentions pipe". For the sake of interest, a selection of less frequent responses to each picture is also given, although some of these were made by only one or two villagers.

For an analysis of answers by region and sex of respondents, see Appendix 3

Part B1 - Additional Stylised Drawings

Aim

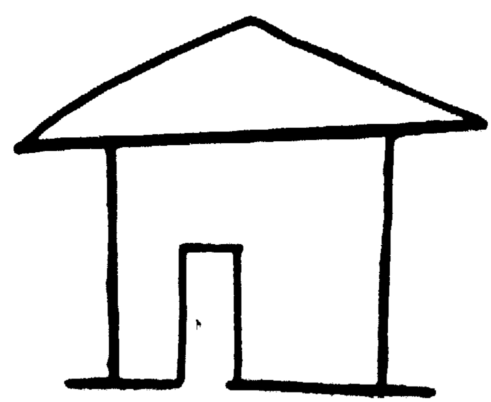
To test the effectiveness of some stylised drawings additional to those used in Part A.

Materials

Highly simplified drawings of common subjects a house, a fish, the sun, people These drawings were scattered among other pictures representing concepts and messages (see Part B2).

Results

1 Artist's intention HOUSE



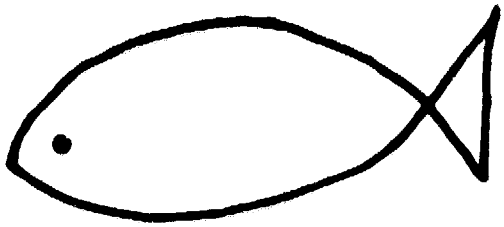
Question: What is this?

Responses		
	House	53%
	Other buildings	12%
	Table	3%
	Chair	3%
	Bow	3%
	Door	2%
	Window	2%
	Don't know	9%

Notes: Answers like table, chair, door, window (and other less frequent responses such as signboard, cupboard, line, gun, room, balance-scale) showed that the drawing had at least communicated the idea of something constructed of straight lines. If the drawing had included some more clues to give an idea of its scale, it might possibly have been a little more successful.

There were large regional differences in responses to this drawing. While 91% in the East and 78% in the West/Central region recognised it as a building, only 26% in the Far West gave this response. The fact that houses in several parts of the Far West of Nepal have flat roofs, not sloping as in the drawing, could have contributed to this.

2. **Artist's intention: FISH**



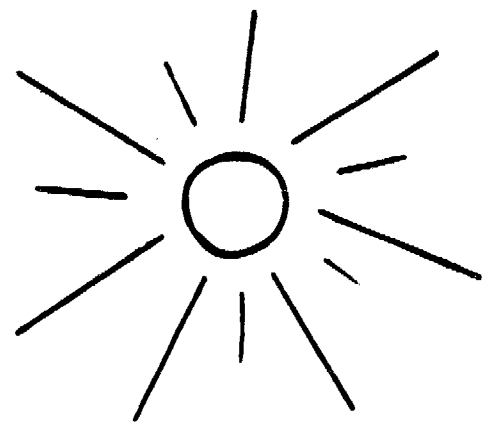
Question: What is this?

Responses:		
	Fish	66%
	Khukri	8%
	Don't know	15%

Notes: A khukri is a local knife shaped like this: 

Other answers included arrow, trident, snake, river bank, bow, cinema, boat, scorpion, house with fence, flower.

3. **Artist's intention: SUN**

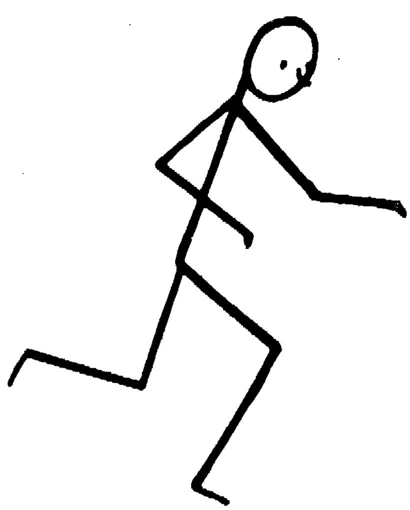


Question: What is this?

Responses:		
	Sun (or Sun God)	59%
	Moon	14%
	Watch, clock	13%
	Flower, sunflower	2%
	Don't know	5%

Notes: The drawing was widely recognised as a circular object, with answers ranging from those mentioned above to wheel, coin, grinding stone, star and water tank.

4. **Artist's intention: PERSON RUNNING**



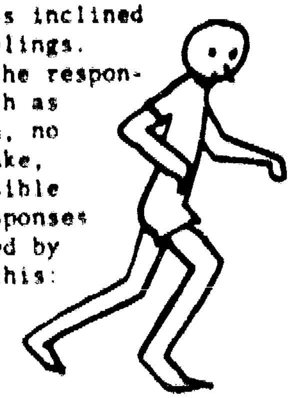
Question 1: What is this?

Responses:		
	Person	45%
	Don't know	30%

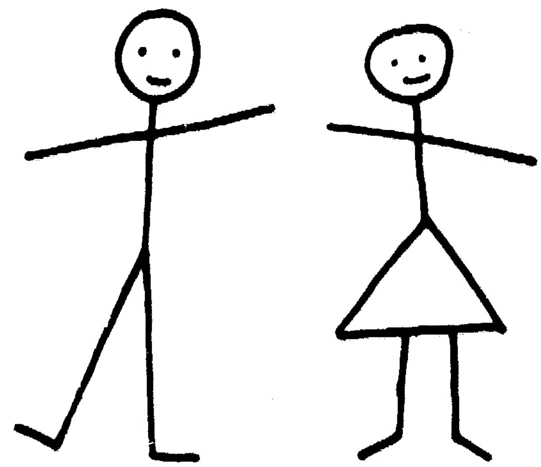
Question 2: (if first answer was "person") What is he doing?

Responses:		
	Kneeling	6%
	Walking	5%
	Running	3%
	Standing	3%

Notes: This drawing was inclined to arouse negative feelings. Fourteen per cent of the respondents gave answers such as devil, bones, skeleton, no flesh, dead ghost, snake, scarecrow. It is possible that some of these responses could have been avoided by using a drawing like this:



5. Artist's intention: MAN AND WOMAN



Question 1: What is this?

Responses:	People	65%
	Ghosts, devils, skeletons	3%
	Don't know	22%

Question 2: (if first answer was "people") What kind of people?

Responses:	Male (left) & Female (right)	24%
	Female (left) & Male (right)	6%
	Thin (left) & Fat (right)	8%

Note: Some attempt at indicating Nepalese-style clothes on the figures may have given a better clue for communicating the intended difference in sex between the two figures.

General Comment on Additional Stylised Drawings

The responses to these drawings were compatible with the responses to the stylised drawings used in Part A of the study. It would seem that for very simple drawings of very common subjects (made without any attempt at "Nepali" style) one can expect about 60% recognition of the class of objects portrayed (building, person, etc.), but that the finer details (action, sex, etc.) are not so easily communicated.

These drawings are certainly more effective than no drawings at all, but having the subject of a drawing recognised is still a long way from conveying a message by means of a picture, as is indicated below.

Part B2 - Concepts and Messages

Aim

This part of the study was designed to find out whether a selection of drawings were actually communicating the messages intended by their artists, and if not, why not.

Materials

In the first stage of the study, a selection was made from pictures drawn by Nepalis and foreigners for NDS booklets, and some additional pictures were drawn especially for the study. The general principle used in selecting this first batch of pictures was that they should be attempting to convey a concept (e.g. "good", "sickness") or a message, rather than just portraying an object, and that they should not be pictures which the interviewers themselves found difficult to understand.

Some of the pictures found to be unsuccessful in the first and second stages of the study were eliminated before the final stage, in an attempt to avoid discouraging villagers by confronting them with too many incomprehensible pictures. In some cases, one part of a complex drawing was isolated for testing in the final stage. Other pictures were modified, either in an attempt to make them more comprehensible, or in an attempt to simplify them to the point where they could be drawn by people with no special artistic talent or training. For a complete list of drawings used in each of the three stages of the study, see Appendix 2. The section "Results" below covers responses to all the pictures used in the final stage of the study, and to some which were dropped from the study before the final stage.

The pictures used were about 17cm by 13cm. They were assembled in a book, and shown to the participating villagers in a set order, one picture at a time. See Appendix 1 for the order in which the pictures were shown.

Method

The pictures were shown one by one to each villager taking part. If the villager did not spontaneously start talking about the pictures, the interviewers asked "What is this?" The follow-up questions allowed for each picture are to be found in the "Results" section below. (In a number of cases the pair of interviewers working in the Far West asked incorrect follow-up questions. This is noted in the "Results" section on the pictures concerned.)

Basically, the interviewers attempted to find out what objects the villager saw in the pictures (the content), and then what the villager thought the picture's message was (its meaning). With all pictures used in all three stages of the study, it was quite rare for villagers to suggest any meaning. Bewildered responses such as "But how can a picture teach anything?" indicate that the idea of pictures conveying instructions or advice is almost totally strange to the villagers who took part in the study.

In the second stage of the study, when villagers had finished talking about the pictures they were asked "How can you tell that the picture means ... [whatever the villager had given as his/her answer]". However, this question did not produce illuminating answers (the most common being "Don't know" or "I can see it in the picture"), so it was dropped from the study.

In the first stage of the study some villagers were invited to draw pictures or signs representing some of the concepts and messages. This move failed to produce anything at all. It was not only that the villagers could not draw, or did not know what to draw. The very idea of a drawing conveying a message struck them as strange. One villager was handed drawing materials and asked "If there was something dangerous near your village, what could you put near it to warn people to keep away?" "A big stone wall," replied the villager, putting the drawing materials to one side. No attempt was made to get villagers to draw pictures in the second and final stages of the study. A drawing by an unschooled resident of Kathmandu, representing the idea of "goodness", was used in the second stage of the study, but then dropped.

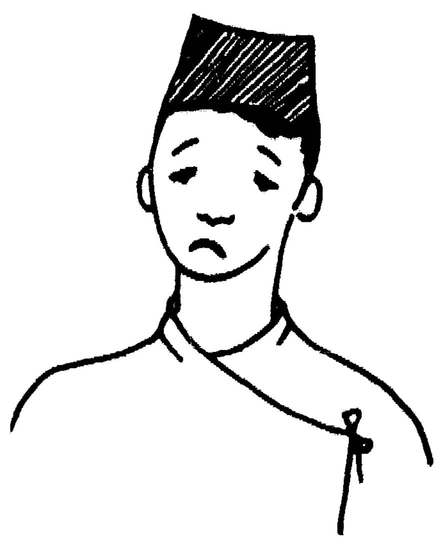
Results

6a. Artist's intention: SADNESS (first stage of study)



This picture was used in the first stage of the study, and the interviewers reported that it was fairly well recognised as a person, although opinions varied as to the expression. In any case, this picture would be difficult for a non-artist to draw, and a simplified drawing was produced for the second and final stages of the study.

6b. Artist's intention: SADNESS (second and final stages of study)



Question 1: What is this?

Responses:	Person	90%
	Don't know	5%

Question 2: (if first answer was "person") How is he feeling?

Responses:	Sad, unhappy	33%*
	Laughing, happy	17%*
	Angry	3%*
	Face is good	11%*
	Face is not good	3%*
	Hurt eyes, blind	5%*

Note: The figures marked with an asterisk are percentages of the respondents who were asked the prescribed follow-up question ("How is he feeling?"). Fifty-five villagers were instead asked "Is he happy or unhappy?" and their answers (unhappy 31%, happy 60%) reverse the pattern to be seen in the above table, which is 2 to 1 in favour of unhappy. It is doubtful what conclusions can or should be drawn from this - did respondents tend to favour the first alternative offered to them, or did they lean towards the more cheerful reply? In any case, the conventional Western use of a down-turned mouth to represent sadness clearly cannot be relied on to communicate its meaning in the circumstances in which this study was conducted.

The answers which have been translated as "Face is good" and "Face is not good" were ambiguous. Some of them probably meant something close to "happy" or "unhappy", while others probably meant that the drawing was good or not good. These answers have therefore been tabulated separately.

Four per cent of the villagers thought the drawing was a picture of the King,

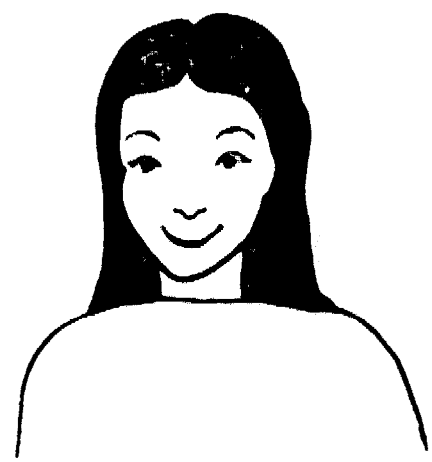
probably because portraits of the Royal family are often the only pictures existing in a Nepalese village. (The same response was given for a number of other pictures of persons in the study.) Some respondents (5%) commented on the man's supposed ethnic group: Bhote, hill-person, Punjabi, Muslim, Tamang, Magar, from the Terai, from Jumla. A few thought he was a Government official. Other answers included devil, temple, face like a cow, tree, animal, large palace where lords assemble, eagle, sick, riding a horse, obstinate, giant, incarnation of God.

7a. Artist's intention: HAPPINESS (first stage)



The interviewers reported that the expression intended in this drawing was not well recognised, and it was excluded after the first stage. A number of respondents remarked that the woman looked like a high-class person: "She isn't one of us". The drawing includes quite a number of details unrelated to the woman's expression, and these may have diverted the attention of the respondents from what the artist intended to convey.

7b. Artist's intention: HAPPINESS (second and final stages)



Question 1: What is this?

Responses	Person		92%
	(including: man	7%	
	Queen, goddess	4%)	
	Don't know		4%

Question 2: (if first answer was "person") How is she feeling?

Responses:	Happy	60%*
	Unhappy	12%*
	Face is good	8%*

Notes: Figures marked with an asterisk are a percentage of the villagers interviewed when interviewers were asking the prescribed follow-up question. Of the 32 villagers who were instead asked "Is she happy or unhappy?" 81% said "Happy" and 6% said "Unhappy".

As in the case of the "Sadness" picture, the response translated as "Face is good" is ambiguous.

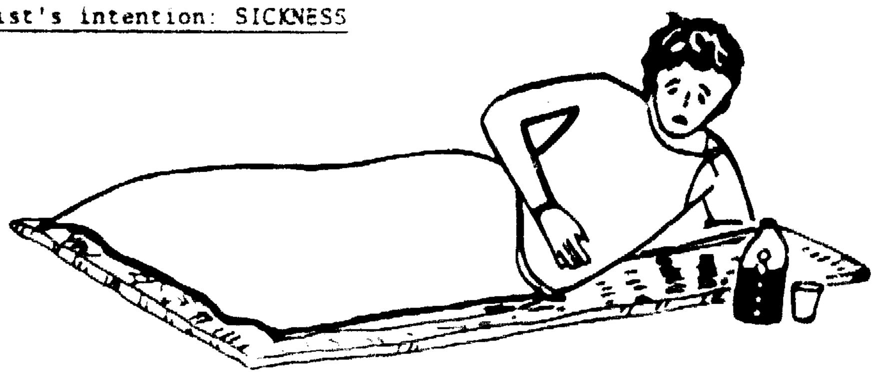
A selection of other answers: ghost, elephant, devil, cow, chair, wizard, door, window, man riding bike, dead, crab, conceited arrogant gentleman.

General comments on "Sadness" and "Happiness" drawings

Pictures of happy or sad faces are often used in instructional posters and other drawings to indicate good or bad consequences of certain actions. In view of this, the lack of success of the "Sadness" pictures is quite important. And it would probably not be wise to assume that happiness is an easy concept to portray simply on the basis of the high score obtained by this particular picture, as it is not known which elements in the drawing were vital to conveying the artist's intention. Other drawings of people with upturned mouths might succeed in conveying the idea of happiness, but they also might not.

It is often suggested that pictures of parts of the body (rather than of a whole person) are difficult for unschooled people to understand, but this did not seem to be so in the case of these pictures. However, the pictures of disembodied hands (see page 36) were far less successful than these pictures of heads.

8. Artist's intention: SICKNESS



Question 1: What is this?

Responses		
	Person	90%
	Monkey	3%
	Don't know	3%

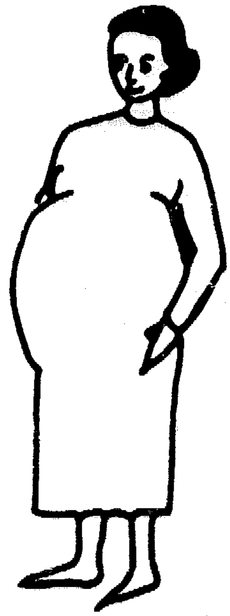
Question 2: (if first answer was "person") How is he?

Responses:		
	Sick, wounded	25%
	Drinking rakshi (local spirit)	13%
	Old	6%
	Unhappy	2%
	Holy man	2%

Notes: The bottle beside the man was thought by people in Kathmandu to indicate that the man was sick, since it is recognisably a local medicine bottle. However, it obviously did not provide enough of a clue for the majority of the villagers taking part in the study even when presented in combination with other clues, such as the hand on the stomach, and the fact that the man is lying down. Medical care is a problem in rural areas, and it is quite possible that many of the villagers interviewed had rarely or never seen a medicine bottle. A few respondents said they could see a person with a medicine bottle, but were not prepared to state that the person was ill.

A selection of the other answers: snake, water-pot, monster, doctor, gun, tiger, boat, bucket, fish, umbrella, instrument, monkey with broken back-bone, person flying helicopter, person with congenital defect. One woman gave this colourful description: "Face of a person, body of a wild animal, hand and hair of a yogi (holy man) - and a pot." Responses to this drawing fall into the same pattern noted with drawings 1-7: widespread recognition of the person in the drawing, but unsatisfactory communication of anything beyond that.

9. Artist's intention PREGNANCY



Question 1: What is this?

Responses:	Person	90%
	Don't know	3%

Question 2: (if first answer was "person")
What kind of person?

Responses:	Woman	61%
	Man	11%
	Pregnant	47%
	Fat	15%
	Fine, beautiful	6%

Notes: Like other languages, Nepali has a number of euphemisms for pregnancy, and this made the responses a little difficult to analyse. The interviewers made notes on the answer sheets when they were convinced that an answer such as "Fat stomach", or "Disease in stomach", or "Woman in trouble" actually meant "Pregnant", but it was not always possible to be sure. Particularly in the case of young women, it was often the embarrassment of the respondent which gave a clue as to her understanding of the picture.

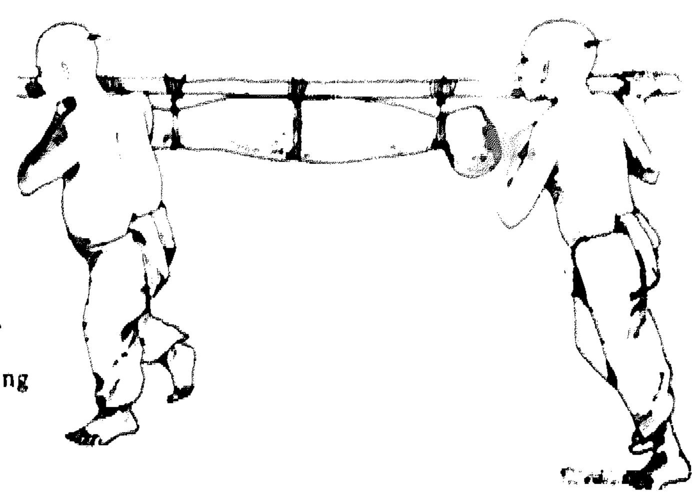
During the training period the interviewers went to a village very near the University in Kathmandu, to do interviews. One young woman answered quite happily until she saw the picture of the pregnant woman. Then she became embarrassed, and left without answering the rest of the questions.

Some answers indicated that the woman did not look like a villager. She was thought to be a goddess, a business woman, a woman of high rank, a woman in Government service, a foreigner - in other words, not someone the villagers could identify with. Local-style clothing could possibly have helped to counteract this.

A selection of other answers: cow, bird, devil, black woman, rabbit, dead body, wearing a coat.

10. Artist's intention: DEATH (carrying dead body)

Questions: What is this? What are they doing?



Responses.

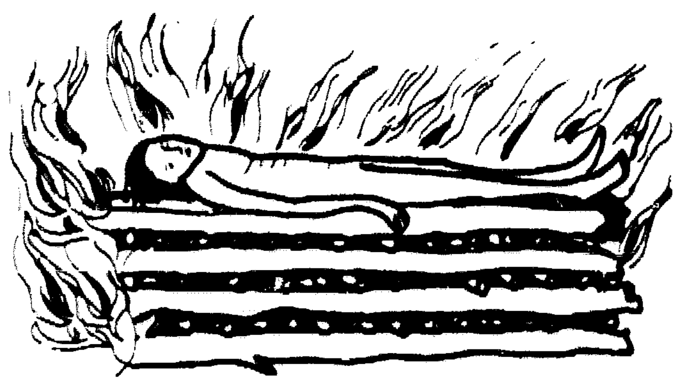
Carrying dead body, death	45%
Carrying something else	32%
Don't know	7%

Notes: In the first stage of the study, when interviews were carried out near Kathmandu, this drawing proved highly successful in conveying the idea of death. However, recognition was much lower in the final

stage, which was carried out in other areas, many of which have different funeral customs.

Altogether 77% of respondents said they could see people carrying something. Those who did not see the dead body suggested a weight-balance, an iron rod, a stick. Among the other answers were: suspension bridge, wild horse, fish, railway station, persons using telephone, sick person, god.

11. Artist's intention: DEATH (funeral pyre)



Question 1: What is this?

Responses:	Person	79%
	Don't know	11%
For "flames":		
	Plants (trees, grass, jungle, flowers)	18%
	Birds	2%

Question 2: (if first answer was "person") What kind of person?

Responses:	Sleeping, lying down	33%
	Dead	32%
	Sick	11%

Notes: If it had been possible to represent the flames more convincingly, this picture might have been more successful. Villagers who thought they were jungle, grass, etc., would have been led away from the idea of a funeral pyre, as bodies are usually cremated on river banks or in other open spaces, and not among thick foliage.

Many of the respondents gave their opinions about parts of the drawing without attempting to give a description linking those parts. A few actually stated that they could see a person lying on firewood, but were not prepared to go one step further and say that the person was dead.

A selection of other answers: Shiva meditating, mule, face like a fish, wild animal, camel, crow, shore of river, water-tank, beautifying to go to bazaar, snake, scorpion, elephant, aeroplane, ocean and peaks, buffalo, playing in cinema, god praying, swimming, insect in stomach, person drying cloth, eaten by fish in the water.

General comment on the "Death" pictures (pictures 10 and 11)

These pictures elicited some noticeably (and puzzlingly) different responses from men and women, and from the various regions. Picture 10 (carrying a dead body) conveyed its meaning to 25% of the men and 10% of the women in the Far West, and to 70% of the men and 45% of the women in the East. Picture 11 (the funeral pyre) also succeeded with 25% of the men and 10% of the women in the Far West.

12. Artist's intention: INDICATION OF DIRECTION (arrow)

Question 1: What is this?

Responses:		
	Arrow	32%
	Weapon	9%
	Trident	8%
	Something by the road	5%
	Flag	2%
	Aeroplane	2%
	Don't know	13%

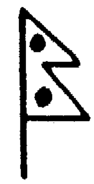
Question 2: What does it indicate?

Responses: Indicates direction 8%



Notes: Quite a number of respondents said they had seen this sign beside the road or track near police posts, etc., but they did not know what it meant

The "Trident" and "Flag" responses may seem unusual, but are easily accounted for. The trident is one of the major weapons of the Lord Shiva, and is carried by many local healers and sages, and is thus familiar to large numbers of Nepalis. The Nepalese flag is shaped like this:

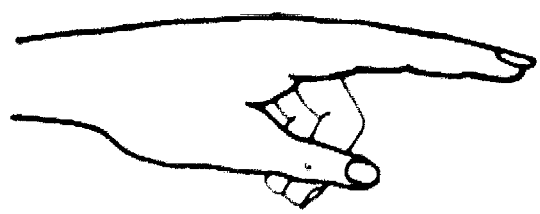


A selection of the other answers: umbrella, pillar, pen, buffalo, fish, stick, scorpion, temple, fool, tape, tower of Nepal, eagle, tree, spade, magic spoon, map.

13. Artist's intention: INDICATION OF DIRECTION (hand)

Question 1: What is this?

Responses:		
	Hand	53%
	Don't know	40%



Question 2: What does it indicate?

Responses: Indicates direction 40%

Notes. The hand is apparently far more widely recognised than the arrow as a means of indicating direction (as logically it should be, since many Nepalis do indicate direction by pointing with their hands). However, it would still be worthwhile promoting the understanding of the arrow as an indication of direction, since it is widely used in printed materials, signs, etc., and is much easier to draw than a hand is. In some pictures the use of a hand to indicate direction could actually cause confusion, if it were interpreted literally.

Fifty-one of the people who responded "Hand" were not asked the follow-up question ("What does it indicate?"). If they had been asked this question, the figure of 40% given above could be expected to have gone as high as 50%.

There were marked regional differences in responses to this picture. In the Far West only 8% recognised the hand, and 5% said it indicated direction. Corresponding figures for the West/Central Region are 70% and 34%, and for the East 83% and 78%.

A selection of the other answers: range of hills, ploughing, aeroplane, tree, horse carriage, rope, flag, road, snake, bullock cart, house, hook, loom, fish, gun, bird, something to eat, pillar, stick, water, wood.

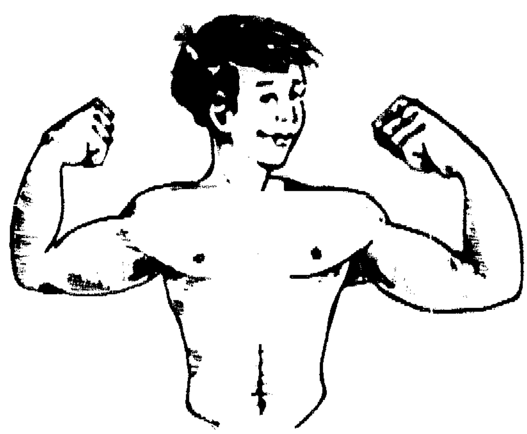
14. Artist's intention: STRENGTH AND WEAKNESS (first and second stages)





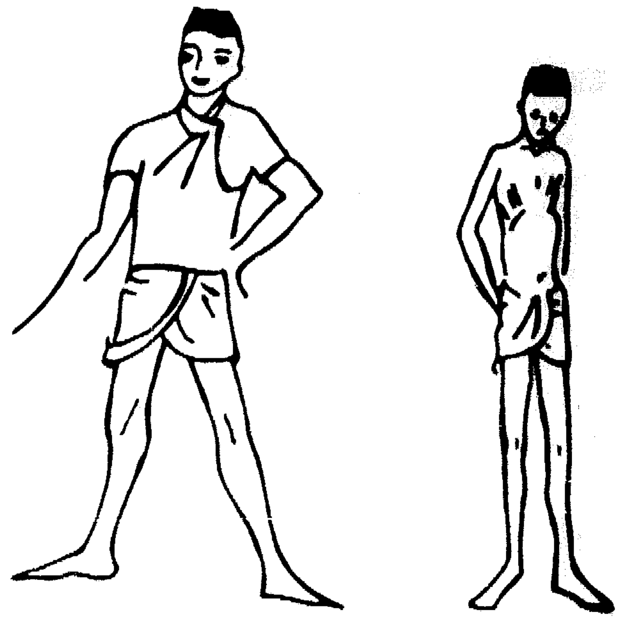
Lifting big pumpkins as a trial of strength is a game played in some parts of Nepal. However, less than 5% of the villagers who were shown this picture said that one man was strong and the other weak. Over 24% took the pumpkins to be flowers. This picture was dropped before the final stage of the study.

15. Artist's intention: STRENGTH (first stage)



This highly Westernised he-man was included in the first stage of the study at the suggestion of an educated Nepali with much village experience. However, it did not suggest the idea of strength to the villagers participating in the study, and was excluded from later stages.

16. Artist's intention STRENGTH AND WEAKNESS (all three stages)



Question 1: What is this?

Responses: People 95%

Question 2: (if first answer was "people") Is there any difference between them?

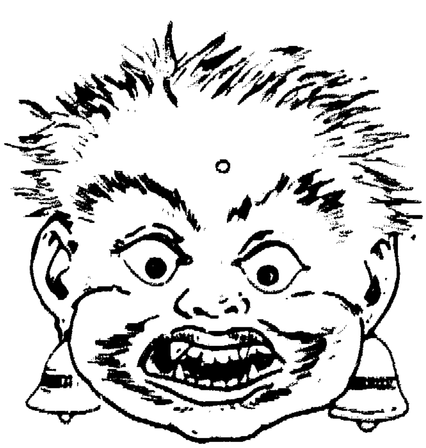
Responses:	Strong and weak	10%
	Fat and thin	32%
	Big and small	8%
	Man and woman	10%
	Happy and sad	3%

Notes. In Nepal, being "fat" is thought of as a good thing, as it is often connected with being healthy or wealthy. It is quite likely that some of the 32% who said the men were "fat and thin" actually understood the idea of the drawing.

Only 2% mentioned that the strong man had no hands. However, when asked about the difference between the two men, quite a number mentioned the different position of the hands, e.g. "One is showing his hands, and the other has his hands behind his back"

Others thought the people depicted were well dressed, police, nice man and devil, young and old, two persons quarrelling.

17a. Artist's intention: BAD (first stage)



The interviewers reported that this drawing, depicting the head of the god Bhairab, was quite successful in arousing negative feelings, many villagers suggesting it was a giant or an evil spirit. For stage two of the study it was combined with other drawings to make up picture 17b.

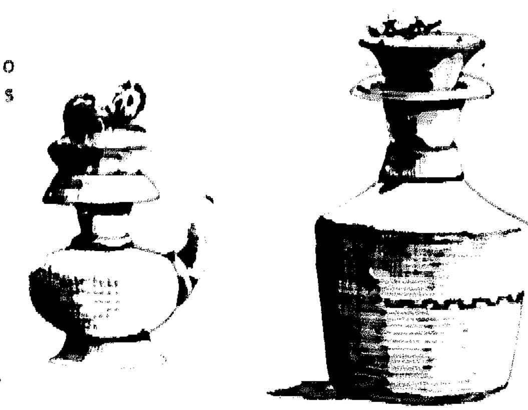
17b. Artist's intention: BOTTLE OF SOMETHING BAD AND BOTTLE OF SOMETHING GOOD (second stage)



Question 1 What is this?

Question 2 (if bottles were mentioned in the first answer) What do you think is in the bottles?

Notes The intention at this stage was to find out whether the negative feelings aroused by the "bad" face (picture 17a) would be transferred to another object shown in the same picture (in this case a bottle).



In the first stage attempts had been made to convey the idea of "good" by depicting water-pots with flowers and curd (when someone goes on a journey or returns, Nepalis place these outside their doors as a sign of good luck). This picture had not succeeded in conveying the idea of "good", and for the second stage of the study a face drawn by an unschooled resident of Kathmandu to express his idea of "goodness" was paired with the second bottle.

These drawings did not convey their message (i.e. "Bottle of something good and bottle of something bad") to a single one of the 99 villagers interviewed during the second stage of the study. No one appeared to make any connection between the good/bad faces and the contents of the bottles. When asked what might be in the bottles the villagers either said (quite reasonably) that they did not know, or made random suggestions such as "water and milk".

Drawing the faces inside (or on) the bottles was suggested but not tried, as this would presumably have led back into problems of literal interpretation.

18. Artist's intention: DANGER



Question: What is this? How does it make you feel?

Responses:		
	Something frightening	23%
	Skull, bones	21%
	Monster	10%
	Ghost	9%
	Crab	3%
	Dead person	3%
	Wild person	2%
	Don't know	16%

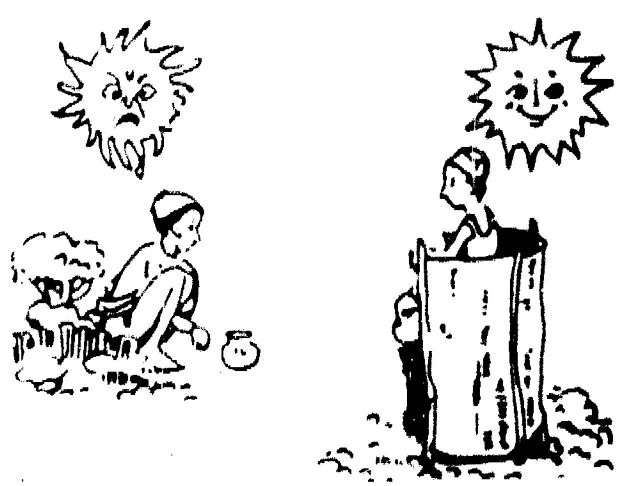
Notes: Although only 1% of respondents actually saw this picture as indicating danger, a much higher proportion gave answers indicating that they found the picture unpleasant. Altogether 61% of the villagers gave answers indicating that the picture aroused negative feelings (skull, bones, monster, ghost, dead person, wild person, and/or something frightening). In one third of the cases, the interviewers did not ask respondents how the picture made them feel, so one might fairly assume that the picture aroused feelings of fear somewhat more often than the above figures indicate.

If any symbol were to be promoted as symbolising danger, this one would seem to have a number of advantages as compared with picture 17a, which is hard to draw and also has religious associations. The skull and crossbones symbol is already in use in Nepal to a limited extent.

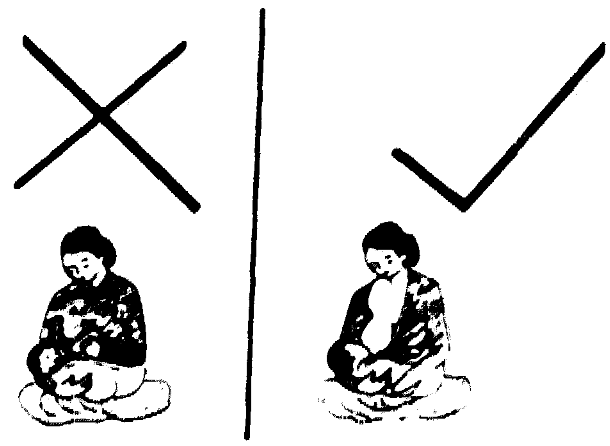
A selection of other answers: spider, god, moon, bird, flower, scorpion, tiger, abominable cat, spinning wheel, bumble-bee, sewing machine, buffalo, monkey, bear, mask.

19. Artist's intention DON'T DEFECATE IN THE BUSHES - USE A LATRINE (first stage)

Another attempt to communicate the ideas of bad/good or prohibition/recommendation. No villagers interpreted the frowning and smiling suns as expressing disapproval and approval of the scenes they were surveying. The other objects and actions portrayed were not clear to many villagers, either.



20. Artist's intention: BREAST-FEED, DON'T BOTTLE- FEED



Question 1: What is this?

Responses: Adult(s) and child(ren) 82%

Question 2: Is there any difference between the two pictures?

Responses: Bottle-feeding and breast-feeding 19%

One feeding, the other not feeding 14%

One feeding medicine, other feeding milk 3%

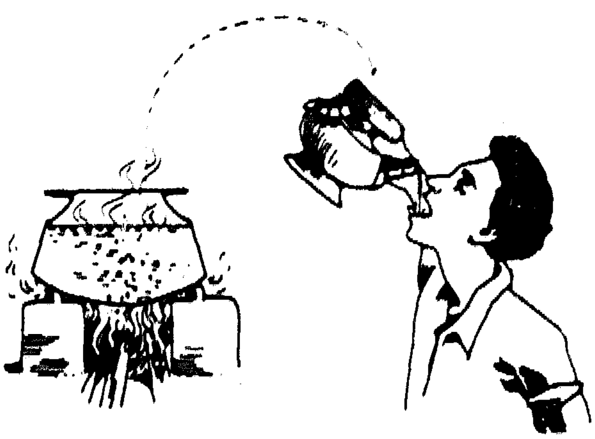
Question 3: What might the pictures be trying to teach?

Responses: Breast-feeding better than bottle-feeding 3%

Notes: Yet another attempt to express the ideas of "good" and "bad". Ticks and crosses are used in Nepalese schools to indicate "right" and "wrong", but it came as no surprise to find that unschooled villagers were not familiar with these signs. Four of the respondents (i.e. about 1%) stated that "✓" meant "right", but only one of these connected the sign with the picture beneath it. It is likely that the other ten respondents who said "Breast-feeding is better than bottle-feeding" were stating their own opinions rather than "reading" the picture.

Most of those who mentioned the ✓ and ✗ either said they did not know what they were, or gave them a pictorial interpretation, such as "plough", "hook", "spade" (for ✓), "fan", "aeroplane", "bananas" (for ✗), or "sticks", "rods" (for both ✓ and ✗).

21. Artist's intention: DRINK BOILED WATER



Question 1: What is this?

Responses:	Person drinking	74%
	Hot water	21%
	Boiled water	3%
	Cooking rice	7%
	Pipe	6%
	Don't know	8%

Question 2: What might the picture be trying to teach?

Responses: It is good to drink hot water to avoid disease 3%

Notes: Nepalese villagers (and others) often do not distinguish between hot water and boiled water. The interviewers themselves were hard to convince that it was worth differentiating between "hot" and "boiled" in the analysis of the interviews. This picture is obviously not able to contribute to the necessary task of health education.

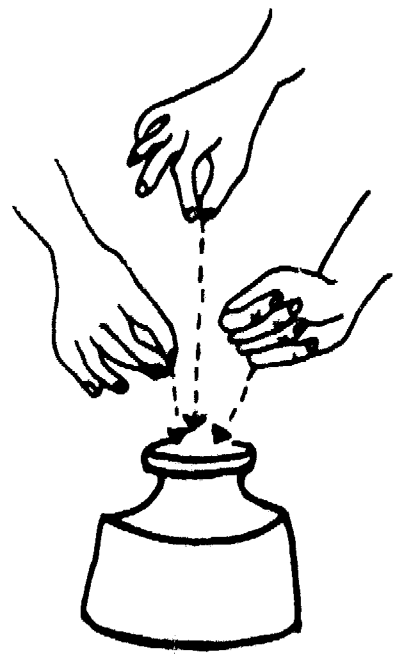
The message of the picture is indeed not very clear - even if it were clear that the

man was drinking boiled water, strictly speaking there is nothing in the picture that says one should do this.

It is likely that the respondents who mentioned a pipe interpreted the arrow as a water-pipe.

A selection of the other answers: horse, elephant, cow, bird, god, devil pushing something, school, window and tiger, ink pot, rat or cat drinking, elephant's trunk, preparing rakshi (local spirit), sewing, flower-pot, sparrow eating rice, smoking hubble-bubble, begging.

22. Artist's intention: PUTTING INGREDIENTS IN POT (final stage)



Question 1: What is this?

Responses:	Pot	50%
	Hands	37%
	No body, no arms	2%
	Flower, plant	20%
	Don't know	21%

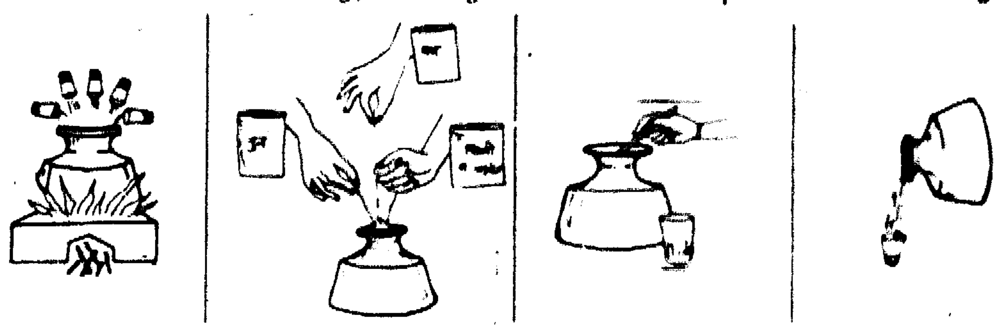
Question 2: (if first answer was "hands") What are they doing?

Responses:	Putting something in pot	17%
	Taking something out of pot	7%

Question 3: (if second answer referred to handling ingredients) How much?

Responses:	Varying quantities (e.g. "this hand much, this hand little")	6%

Notes: This picture is taken from a series of pictures showing how to make a rehydration mixture for the treatment of diarrhoea. The whole series was tested in the first two stages of the study, but failed to communicate its meaning, although interviewers explained the meaning of the



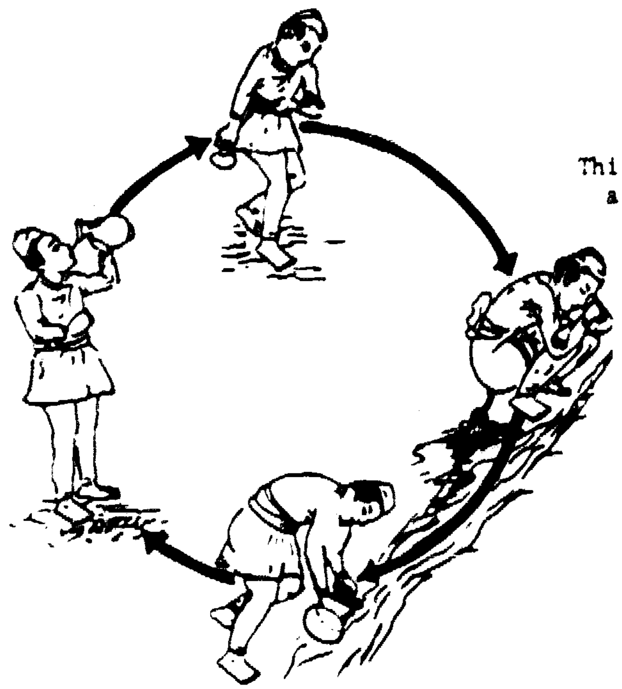
written words in the second frame ("salt, soda, sugar"). This single frame was used in the final stage of the study to find out whether the disembodied hands would be recognised, and whether the villagers noticed that the hands were supposed to be putting varying quantities into the pot.

Although only 2% of the villagers actually commented on the fact that the hands were

disembodied, it is quite likely that the fact that they were disembodied accounts for the fairly low recognition of the hands.

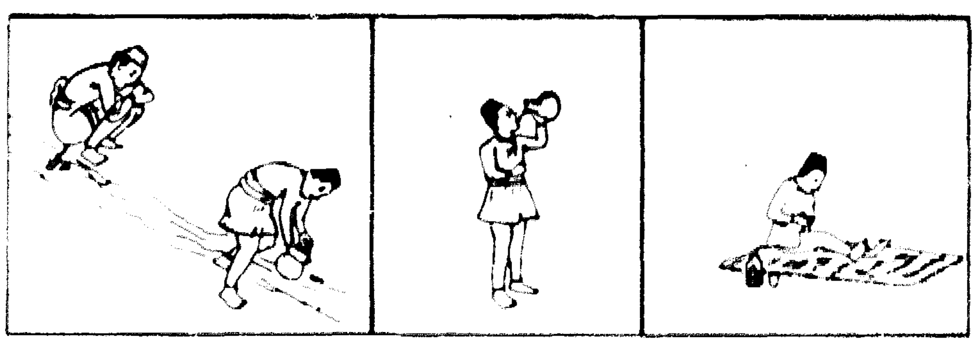
Only about half the people who mentioned putting ingredients into a pot or taking them out were asked the final follow-up question ("How much?"); the figure of 6% given above is probably only about half of what it otherwise might have been.

23a. Artist's intention: DRINKING POLLUTED WATER MAKES PEOPLE ILL (first stage)



This picture, designed to encourage people a) not to defecate in rivers and b) not to drink polluted water, was tried in the firststage of the study. Interviewers reported that it was not successful, and that some villagers had commented that one man appears to be standing on top of another one. The villagers did not appear to take any notice of the arrows in the picture.

23b. Artist's intention: DRINKING POLLUTED WATER MAKES PEOPLE ILL (second and final stages)



A B C

In an attempt to avoid the confusion reported in reactions to the previous picture, it was converted into picture-strip style for the second stage of the study. Still, only one out of 89 villagers understood the message intended. The pictures having given sufficient indication of their general incomprehensibility, they were left in the study solely to find out whether the villagers were looking at the pictures in the order intended (i.e. from left to right). The order noted was as follows:

ABC	45%	BAC	26%	CAB	0%
ACB	2%	BCA	9%	CBA	11%

24. Artist's intention: SOMEONE TALKING ABOUT SOMETHING
SOMEONE THINKING ABOUT SOMETHING (first stage)



These two pictures attempted to convey the idea of people talking or thinking about something, using the device employed in Western and Asian comics or picture books - "bubbles" above people's heads.



Two villagers mentioned that the men in the first drawing were talking, but not that they were supposed to be talking about the particular things in the "bubble". No one understood the drawing of the man thinking. A few said he was sick, sorrowful or simply that he had his hand on his head.

Comics and picture books are popular in the cities of Nepal, and city-dwellers would probably be familiar with the meaning of the "bubbles". If these conventions could be taught in the villages also, they would expand the range of pictorial instructional material.

25. Artist's intention: FLIES CARRY DISEASE (first stage)





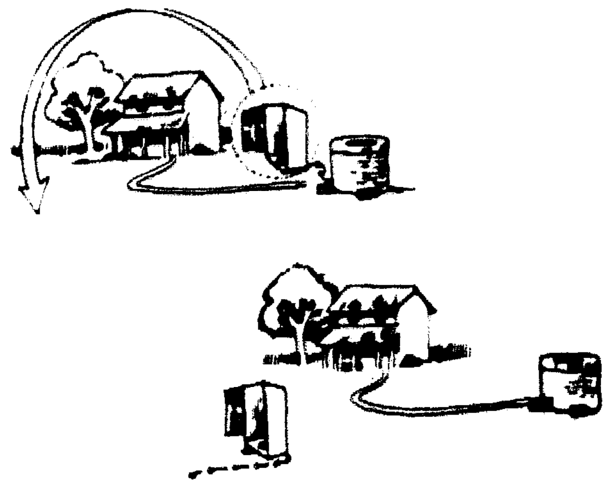
None of the villagers who were asked about these drawings could see any connection between them. Some could see there was a dog, a crow and a man eating in one drawing, but no one assumed they had anything to do with each other.

No one recognised the flies. Some villagers said they could see butterflies. Magnifying glasses are not generally found in villages, so the process of enlarging the fly was not understood.

The idea of the flies moving from one place (the garbage pile) to another (the food) was not understood. The sick man was not recognised as such. Some villagers said he was sitting on a chair or on a table (most villagers sleep on mats on the floor or a bench, rather than on a bed).

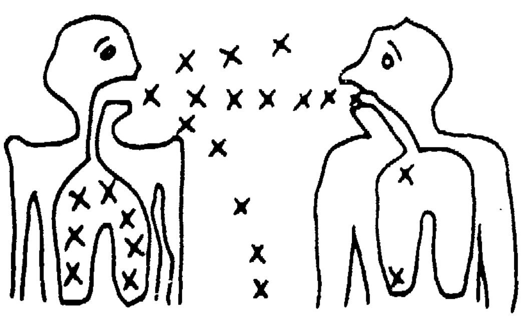
These drawings probably contain too many details - there is too much going on in the pictures (see also picture 26).

26. Artist's intention: BUILD LATRINES AWAY FROM THE WATER SUPPLY (first and second stages)



This drawing was not understood by any respondents. Even the objects portrayed were not well recognised. For example, only 53 of the 89 respondents in the second stage even mentioned the houses in the picture, although one would have expected a higher rate of recognition than this. Some of the reasons for the picture's lack of success may be: the inclusion of a large number of objects in one drawing (even though the actual drawing used was considerably larger than the reproduction on this page), the use of arrows, which are not widely understood to indicate direction, and the lack of any indication of what the latrines are supposed to be (a latrine is not a common feature of Nepalese villages).

27. Artist's intention: TB CAN BE TRANSMITTED FROM A SICK PERSON TO A HEALTHY ONE (first and second stages)



This drawing was included in the study at the request of a member of the British Nepal Medical Trust, which uses it in TB-prevention campaigns. It was taken to six villages and shown to over 100 people. In five of the villages, none of the villagers could understand it, for reasons which probably included the fact that germs and lungs are not usually visible. However, in the remaining village, large numbers of villagers were able to explain what the picture meant. The reason for this proved to be that a team from the British Nepal Medical Trust had visited that particular village five months before, and had shown this picture and explained its meaning. This is very encouraging indeed, indicating that even quite crude drawings can serve as reminders for villagers, provided they are adequately explained.

PART C - COLOURS

For this part of the study, cards (8 cm. by 4 cm.) in sixteen different colours were scattered in front of the villager, who was then asked:

1. Which colours do you like?
2. Which colours do you dislike?
3. Which colours are for happy occasions?
4. Which colours are for sad occasions?
5. Which colours are for women?
6. Which colours are for men?
7. Which colours are for gods?
8. Which colours are for devils?

The villager responded by pointing to the cards or touching them, not by trying to name the colours.

In addition, the villagers were invited to make further comments on any of the colours if they wanted to. However, the few additional comments that were made added nothing of importance to the information gained through the first eight questions. The additional comments either repeated opinions elicited by the first eight questions ("This is a colour for festivals") or were of the order of "I would like to paint my house that colour", or "I've got a pair of socks like that". No information was gained on possible symbolic meanings attached to the various colours. Although the questions asked did not mention clothes, there is a strong likelihood that many of the villagers were thinking of colours for clothes when they answered, particularly questions 5 and 6.

These are the colours which were shown to the villagers:

purple	black
bright pink	white
red	grey
orange	light blue
yellow	turquoise
ochre	dark blue
tan	light green
dark brown	dark green

Over-all, the most-liked colours were the purple, bright pink and red, and these were the colours most often mentioned as being for happy occasions, and also for women. Orange and yellow were also well liked, and these were the colours most mentioned as being "for Gods". The greens and blues were also popular colours, particularly in the villages in the Far West region.

The colour arousing the strongest negative reaction was black. It was the most disliked colour, most often mentioned as being for sad occasions (even though in Nepal it does not have the associations with mourning which it does in European countries), and by far the most often mentioned as being a colour for devils. Other disliked colours were the dark brown and grey, followed by tan and ochre.

The pattern of reactions to all these colours was a [illegible]e one (high score for questions 1 and 3 coupled with a low score for questions 2 and 4, [illegible] vice versa), but the pattern produced by white was much more complex. It was quite often picked out as a liked colour and a colour for happy occasions (under both these headings it had a higher score than any other colour in the Far West, and the fourth highest score overall). But it was even more frequently mentioned as being a colour for sad occasions (not surprisingly, since Hindu men in mourning wear white). And it has a relatively high score as a colour for gods and as a colour for devils.

The table on page 41 shows the overall totals scored by each colour. Totals by region can be found in Appendix 4. 413 villagers took part in this section of the study.

It is perhaps not necessary to caution against making too literal use of these results. In European countries, black is the traditional colour for mourning, but one does not take it for granted that a woman in a black dress is in mourning, or even sad. She may well be on her way to a party. Similarly, one cannot assume that a Nepalese villager will expect a

message printed in red to be a happy message, or a child pictured in a red dress to be a happy child.

This study did not investigate villagers' reactions to coloured pictures. However, using colour in any but a "realistic" way would seem to be fraught with possibilities for misinterpretation. For example, if anyone is planning to print a picture of a group of people on bright green card, they would probably be well advised to pre-test this material very carefully, to make sure it is not being seen as a picture of some bright green people.

<u>Total scores for the colours used in the study</u>

	purple	bright pink	red	orange	yellow	ochre	tan	dark brown	black	white	grey	light blue	turquoise	dark blue	light green	dark green
Liked	75*	73*	61*	54	51	7	6	4	15	58	18	47	44	55	52	37
Disliked	4	6	9	11	12	56	33	129*	134*	18	78*	13	5	9	3	11
For happy occasions	80*	69*	72*	54	48	6	6	7	7	56	4	17	23	34	38	34
For sad occasions	5	13	8	7	14	27	33	79*	119*	81*	35	18	6	14	11	10
For women	84*	109*	98*	67	37	1	4	4	13	3	0	17	40	50	60	49
For men	21	17	23	12	35	17	13	14	24	119*	22	91*	72*	66	18	30
For gods	9	35	84*	124*	170*	7	4	2	19	79	4	4	6	9	10	10
For devils	5	14	27	17	24	8	11	88*	254*	42*	15	4	2	8	11	5
Total mentions	283	336	382	346	391	129	110	327	585	456	176	211	196	245	203	186

* The highest three scores in each of the eight categories are marked with an asterisk.

CONCLUSIONS

1. Attempts to communicate ideas and instructions to unschooled rural villagers by means of pictures only are unlikely to succeed. Some of the reasons for this seem to be:

- Unschooled villagers do not expect pictures to convey messages.
- Pictures intended to convey messages often make use of symbols (✓, ✗, ⟶, etc.) the meaning of which cannot be known unless it has been learned.
- The portrayal of objects in pictures may not be comprehensible for villagers.
- Pictures intended to convey messages often consist of a series meant to be read in a certain order (often from left to right if the language of the artist is written from left to right). People who have not learned to read or write do not necessarily look at pictures in the order intended.
- Even if the various objects portrayed in a picture are clear to villagers, they do not necessarily try to interpret the picture in a way that accounts for the juxtaposition of the objects portrayed.

2. The most effective style of picture is clear, realistic, without inessential background. Three-tone drawings or block-outs are better than more "simplified" pictures. The more stylised a drawing is, the less success it is likely to have.

3. However, even quite a crude, schematic drawing can be useful as a reminder of a message already conveyed by person-to-person contact.

4. Drawings are more likely to be successful if such things as buildings, clothes etc. are based on locally familiar styles.

5. In general, Nepalese villagers like bright colours, particularly red, and associate them with happy occasions. Dull and dark colours are not liked, and are associated with unhappy occasions and evil spirits.

PRACTICAL IMPLICATIONS

1. Effort and time spent on attempting to communicate with unschooled villagers solely by means of pictures is probably wasted.

2. However, since pictures can be in many places at once and a development worker cannot, pictures can profitably be used to reinforce development messages conveyed to unschooled villagers.

3. Pamphlets and handbooks will probably be most useful if they are aimed at networks of literate people who can help to convey their message to villagers. Examples of such networks are National Development Service participants, Government extension workers, school-children, etc. The pamphlets and handbooks can include pictures which can be used to remind villagers of their message, and advice for the networks on how to use these pictures (and other visual aids such as demonstrations) most effectively.

4. People using pictures and posters to reinforce development messages should discuss them with as many villagers as possible. They should make sure that the villagers recognise the objects portrayed and understand the message intended. (The discussion may have to be handled tactfully in the case of subjects such as pregnancy which are likely to cause embarrassment in certain circumstances.) If pictures are not adequately discussed and explained, there is a good chance that they will serve nothing beyond a decorative function.

5. People helping villagers to understand the message of pictures and posters should explain the meaning of any conventional signs and symbols used by the artist (e.g. ✗, ✓, ?, ⟶, upturned mouth for happiness, downturned mouth for sadness, etc). It is likely that if this is consistently done over a period in any given village, the villagers will learn to "read" the messages pictures are trying to convey.

6. Posters and wallcharts should express their message in words as well as pictures. The words should be large enough, few enough and simple enough to be read by children, even if the message is actually intended for adults. It can at least be hoped that children who are learning to read at school may read the message to unschooled adult villagers.

7. A single picture should not include a large number of objects, or attempt to portray several steps in a process.

8. If a poster or wallchart consists of a series of pictures, these pictures should be numbered to indicate what order they should be read in.

9. The picture style used will depend to some extent on the skill of the artist and on facilities and equipment available. Pictures should be as realistic as possible, and exclude inessential background detail. Material produced for large-scale distribution should make use of 3-tone drawings or blockouts rather than more simplified drawings, while village-level workers can at least try to avoid extreme stylisation.

10 Unless there is some special reason for not doing so, pictures of objects, people (and the things people do) etc. should be made as much as possible like the objects, people and actions in the area where the pictures will be used. Such things as different styles of dress easily lead villagers to assume that a picture does not refer to their own village or their own life. Since there are great variations in styles and customs from one part of the country to another, material produced for national distribution cannot be equally appropriate for all areas, but village-level workers can take care with the details in pictures they are making or adapting for local use.

11. People preparing pictures for use in the villages should bear in mind the possibility that they will be taken quite literally by villagers. Thus enlargement of a detail for effect may well have a negative effect on understanding of the picture. (And of course the depicting of an unfamiliar object such as a magnifying glass to explain the enlargement can only provide an additional obstacle to understanding).

12. If people involved in producing pictures for use in villages could agree on a common "vocabulary" of signs and symbols, and if these symbols were consistently used and taught to villagers, the range of ideas effectively expressed by pictures could gradually be extended. Such a "vocabulary" of symbols might include:

✓ = Good
✗ = Bad
☠ = Danger
⟶ = Indication of direction
☺ = Happy
☹ = Sad

Any other symbols could be effective, so long as they were easy to draw and consistently used, but since there does not seem to be in Nepal an established "vocabulary" of symbols which are widely used and recognised by villagers, there is much to be said for adopting symbols already in use internationally.

13. Use of colour in posters, etc. for villagers should probably be guided by two considerations. The first is the colour preferences and associations indicated by the study, which would lead one to use bright colours, particularly reds, to indicate happiness, goodness, etc., and dull, dark colours for unhappy situations. However, the second and perhaps more important consideration is the likelihood of villagers interpreting pictures literally. It would seem most unwise to use colours in a non-realistic way merely to express a mood. However, often a compromise between these two considerations may be reached. For example, purple or bright pink could be used for the clothing of a happy woman, and dark brown or black for the clothing of an unhappy woman, but it would be unwise to use these colours for the women's faces.

OTHER STUDIES

A number of studies have been done in this same general field in other parts of the world, but some people interested in the production of visual materials in Asia have expressed doubts about whether findings obtained, say, in African villages, would have any application in Asia.

It therefore seems particularly worthwhile to mention some of the conclusions of a few studies carried out in other countries. Some of these conclusions are directly confirmed by this study, and others, which lie slightly outside this study's field of enquiry, nevertheless seem likely to be relevant to the villages of Nepal.

South America

A study carried out in Brazilian youth clubs by Luiz Fonseca and Bryant Kearl led to the general conclusion that "two variables - age and education - are main forces influencing one's ability to comprehend and learn from pictorial symbols". Some of their other generalizations are as follows:

"1. Pictorial symbols to be most useful for young people of limited schooling must evidence intelligent selection of detail. Comprehension is reduced either by excessive unnecessary detail or excessive deletion of detail.

2. Recognizable familiar objects presented in an illustration add to comprehensibility. Conversely, the presence of locally unfamiliar objects tends to reduce correct interpretation of the symbol.

3. The illustration of a process involving separate steps or actions should have at least as many individual pictures or frames as there are main steps or actions of the depicted process.

4. To achieve best comprehension, pictorial symbols should be as realistic as possible. Any kind of imaginative treatment (such as "humanization" of animals) reduces comprehension.

5. Special care should be taken with symbols which have both a literal and a figurative meaning, since people of limited education tend to give its most limited literal interpretation to such pictorial symbols."

Fonseca and Kearl further advise illustrators to "place the clarity of the illustration above most other considerations of artistic presentation", to make clear the order in which a viewer should read a series of symbols describing a process or telling a story, and to be "especially careful with arbitrary symbols ($, ?, +, etc.) whose meanings are not intended to be self-evident but admittedly depend on prior education".

This study is reported in *Comprehension of Pictorial Symbols: an Experiment in Rural Brazil* by Luiz Fonseca and Bryant Kearl, published by College of Agriculture, University of Wisconsin, 1960.

Africa

A. Experiments in Zambia with four different picture-styles indicated that the block-out style is markedly more effective than the ordinary photograph, the line drawing or the silhouette. This is reported in *Applied Communication in Developing Countries: Ideas and Observations* by Andreas Fuglesang, published by the Dag Hammarskjöld Foundation, Uppsala, 1973 - a book which contains a good deal of other stimulating material of interest to people preparing visual material for use with villagers.

B. A study carried out by Alan C. Holmes in Kenya in 1961-62 led him to conclude, among other things, that:

1. If one wants to represent a process involving a series of actions (e.g. boiling water before drinking it) it will be more easily understood by people of limited education if a series of pictures is used (rather than trying to compress the series of actions into one or two pictures).

2. Stylised drawings ("isotype" symbols or stick drawings) present no particular difficulties of interpretation, if they are of objects familiar to the viewer.

3. Excessive unnecessary detail in a picture will make understanding more difficult.

4. Excessive deletion of detail in a picture also reduces comprehensibility.

5. Pictorial symbols which can be interpreted literally or can be given an "extended" meaning will tend to be interpreted literally by people of limited education.

Mr Holmes remarks that "it is never safe to act on assumptions as to what people will or will not understand visually without first testing the assumptions".

This study is reported in *A Study of Understanding of Visual Symbols in Kenya* by Alan C. Holmes, published by the Overseas Visual Aids Centre, London. Further investigations in this field, started by Mr Holmes and completed by Bernard Shaw, are reported in *Visual Symbols Survey - Report on the Recognition of Drawings in Kenya* by Bernard Shaw, published by the Centre for Educational Development Overseas, London.

Asia

• *Communicating with Villagers in North-East Thailand* is the title of a study by N. Damman of USOM, who tested radio programmes, stories, photographs, drawings and colours among literate and illiterate villagers. Some of his conclusions were:

1. The villager is primarily interested in familiar subjects. Material should be realistic and specific. Abstraction have no meaning for the typical villager. (The "skull and crossbones" symbol for danger was seen as some sort of ghost.)

2. Representations of parts of the body were not as well recognised as representations of the whole body.

3. Colour pictures were found to be more popular than black and white. (However, it is not clear whether the pictures were tested for comprehension, or whether the people were simply asked which pictures they preferred).

4. Stick figures were understood by the villagers if the subjects were familiar.

5. Red was the most popular colour, orange was seen as the colour of religion, black suggested old age and death, white was for purity, blue a cold colour without meaning, and green was the least favoured colour.

6. In coloured pictures and posters, the colours that were most true to life were preferred and most easily understood.

7. Of the black and white picture-styles tested, the photograph was found to be the most popular and the line drawing least popular. (However, it is not clear which picture-styles were tried, and whether, for example, the block-out photograph was among them).

• Since it took place in Nepal, one should mention an experiment carried out by Donald B. Gooch in 1961, and reported by him in *Picture-Talk in Kathmandu*, published by the University of Michigan Faculty Research Fund. The author states that he is "more than ever convinced that the principle of word sentences composed of pictographic symbols is the quickest, easiest and cheapest way of communicating elementary ideas to predominantly illiterate or non-literate people in remote and technologically underdeveloped areas". However, experience with the study described in this report does not lead one to share Mr Gooch's confidence about the effectiveness of pictures for communicating ideas in a "non-personal" situation. Perhaps it is a matter of what one is prepared to count as "successful communication". Mr Gooch showed his pictures to groups of between 20 and 50 illiterate or semi-literate villagers simultaneously, and apparently counted a drawing as a failure only if nobody in the group was able to understand the artist's intention.

General

• A very useful guide to work done in this field is to be found in *Visual Perception - A Review of the Literature Relating to Studies Relevant to the Development of Teaching Materials in the Commonwealth* by Helen Coppen, published by the Commonwealth Secretariat, London, 1970.

APPENDIX 1

PART B - ORDER IN WHICH PICTURES WERE PRESENTED TO VILLAGERS IN FINAL STAGE OF STUDY

ARTIST'S INTENTION	FOR COMMENTARY SEE
Sadness	page 25, picture 6b
Death (carrying body)	page 28, picture 10
Person running	page 22, picture 4
Happiness	page 26, picture 7b
House	page 21, picture 1
Strength and weakness	page 32, picture 16
Fish	page 22, picture 2
Death (funeral pyre)	page 29, picture 11
Man and woman	page 23, picture 5
Sickness	page 27, picture 8
Pregnancy	page 28, picture 9
Drink boiled water	page 35, picture 21
Breast-feed, don't bottle-feed	page 35, picture 20
Drinking polluted water makes people ill	page 37, picture 23b
Putting ingredients in pot	page 36, picture 22
Indication of direction (arrow)	page 30, picture 12
Danger	page 34, picture 18
Indication of direction (hand)	page 30, picture 13

APPENDIX 2

Part B - Development of pictures from first stage to final stage

First stage	Pic no.	Second stage	Pic no.	Final stage	Pic no
House	1	Same as 1st stage		Same as 1st stage	
Fish	2	"		"	
Sun	3	"		"	
Person running	4	"		"	
Man and woman	5	"		"	
Sadness	6 a	Simplified	6 b	Same as 2nd stage	
Happiness	7 a	Simplified	7 b	Same as 2nd stage	
Sickness	*	Simplified	*	Simplified further	8
Pregnancy(woman&child)	*	Simplified	9	Same as 2nd stage	
Death(carrying body)	10	Same as 1st stage		Same as 1st stage	
Death(funeral pyre)	*	Simplified	11	Same as 2nd stage	
		Indication of direction (arrow)	12	Same as 2nd stage	
		Indication of direction (hand)	13	Same as 2nd stage	
Strength & weakness (pictures shown separately)	14	Same(pictures linked together)	14	Excluded	
Strength	15	Excluded		Excluded	
Strength & weakness (pictures shown separately)	16	Same(pictures linked together)	16	Same as 2nd stage	
Bad	17 a	Excluded(see 17b)		Excluded	
		Bottle of something good & bottle of something bad	17 b	Excluded	
Good	see pg. 33	Excluded		Excluded	
				Danger(skull & crossbones)	18
Don't defecate in bushes-use a latrine	19	Excluded		Excluded	
		Breast-feed, don't bottle-feed(tick & cross)	20	Same as 2nd stage	
Drink boiled water	21	Same as 1st stage		Same as 1st stage	
How to make re-hydration mixture	see pg. 36	Same as 1st stage		Putting ingredients in a pot (one picture from the strip shown separately)	22
Drinking polluted water makes people ill	23 a	Modified	23 b	Same(but question asked only about in what order pictures were read)	
Someone talking about something, someone thinking about something	24	Excluded		Excluded	

First stage	Pic no.	Second stage	Pic no.	Final stage	Pic no.
Flies carry disease	25	Excluded		Excluded	
Build latrines away from the water supply	26	Same as 1st stage		Excluded	
TB can be transmitted from a sick person to a healthy one	27	Same as 1st stage		Excluded	

Pictures that were tested in 1st stage, but are not discussed in the report :

Healthy (boy playing football)	*	Excluded
Bad (man hits boy)	*	Excluded
Injections prevent disease	*	Excluded
Eating fruit is good for health, drinking bottled drinks is not good for health	*	Excluded
Latrine should be below, not above water supply (tick & cross)		Excluded (see picture 20)
Flies cause disease, injections prevent disease	*	Excluded
Use a level spoonful, not a heaped one. Make the spoonful level by smoothing off with straight object	*	Excluded
Wash your hands before eating		Excluded

* In the "picture no." column, an asterisk means the picture was tested, but has not been reproduced in this report.

APPENDIX 3

PART B - A SELECTION OF RESPONSES BY REGION AND SEX

Number of respondents

	Men	Women	Total
Far West	91	49	140
West/Central	68	57	125
East	76	69	145
Total	235	175	410

Note Figures in the table below are percentages of the total for each category.

Picture no. & Title	Responses	FAR WEST Men	FAR WEST Women	FAR WEST Total	WEST/CENTRAL Men	WEST/CENTRAL Women	WEST/CENTRAL Total	EAST Men	EAST Women	EAST Total	NEPAL Total
1. HOUSE	House	22	12	19	74	60	67	75	71	73	53
	Building (including house)	29	20	26	76	86	78	93	90	91	65
2. FISH	Fish	51	24	39	91	81	86	70	80	74	66
	Khukri (Nepali knife)	1	0	1	1	0	1	26	17	22	8
3. SUN	Sun	43	39	41	63	60	62	74	71	72	59
	Moon, clock, wheel	41	32	39	19	34	25	25	18	22	28
4. PERSON RUNNING	Person	40	37	39	68	61	65	37	33	35	45
	Walking, running	7	2	5	12	21	16	4	1	3	8
5. MAN & WOMAN	People	58	63	60	78	70	75	64	58	62	65
	Male and female	25	35	29	34	19	27	32	12	22	24
6b. SADNESS	Person	73	69	76	96	98	97	99	94	97	90
	Sad, unhappy	10	8	9	28	28	31	50	41	46	33
	Laughing, happy	11	24	20	19	23	21	11	10	10	17
7b. HAPPINESS	Person	81	76	79	97	100	98	95	100	98	92
	Happy	38	53	44	56	70	62	55	70	62	60
	Unhappy	13	4	9	16	12	13	14	6	10	12
8. SICKNESS	Person	84	78	82	98	94	96	90	88	89	90
	Sick, wounded	29	16	24	26	25	26	25	25	25	25

Picture no. & Title	Responses	FAR WEST Men	FAR WEST Women	FAR WEST Total	WEST/CENTRAL Men	WEST/CENTRAL Women	WEST/CENTRAL Total	EAST Men	EAST Women	EAST Total	NEPAL Total
9. PREGNANCY	Pregnant	31	27	29	46	51	48	64	61	63	47
	Fat	12	8	11	16	21	18	12	17	14	15
10. DEATH (carrying body)	Carrying dead body	25	10	20	59	56	58	70	45	58	45
	Carrying something else	36	39	38	34	33	34	20	28	23	32
11. DEATH (funeral pyre)	Person	71	59	66	98	92	94	84	66	77	79
	Sleeping, lying down	23	27	24	41	39	40	42	28	35	33
	Dead	25	10	20	26	39	34	37	35	36	32
12. DIRECTION (arrow)	Arrow	19	10	16	32	18	26	55	46	51	32
	Indicates direction	12	2	8	18	11	14	5	0	3	8
	Something by the road	11	2	7	12	0	7	1	0	1	5
13. DIRECTION (hand)	Hand	9	8	8	81	58	70	82	84	83	53
	Indicates direction	4	6	5	40	28	34	79	77	78	40
16. STRENGTH & WEAKNESS	Strong and weak	10	16	12	13	9	11	11	0	6	10
	Fat and thin	40	20	33	22	19	21	41	43	42	32
18. DANGER	Skull, bones	2	0	1	49	23	37	29	23	26	21
	Indicates danger	0	0	0	2	0	1	2	0	1	1
	Negative feelings	49	27	41	84	84	84	63	55	60	61
20. BREAST-FEED ...	Adult(s) and child(ren)	70	69	70	81	91	86	94	89	92	82
	Breast- and bottle-feeding	9	12	10	36	24	30	23	13	17	19
	Breast-feed, don't bottle-feed	1	0	1	7	2	5	1	4	3	3
21. DRINK BOILED WATER	Person drinking	59	33	47	87	86	86	92	84	88	74
	Hot water	1	2	2	29	21	26	37	42	39	21
	Boiled water	3	4	4	9	2	6	0	0	0	3
22. PUTTING INGREDIENTS...	Pot	49	35	44	74	63	69	41	38	40	50
	Hands	13	14	14	72	54	64	36	36	36	37
	Putting something in pot	4	8	6	43	21	33	20	7	14	17
	Varying quantities	4	2	3	19	16	18	0	0	0	6
23b. DRINKING POLLUTED WATER...	Reads from left to right	41	33	38	43	56	49	36	57	48	47
	Reads from the middle	43	43	43	29	33	31	36	29	32	35
	Reads from right to left	9	12	10	24	10	17	11	6	8	11

APPENDIX 4

TOTAL SCORES FOR THE COLOURS USED IN THE STUDY - BY REGION

FAR WEST

	purple	bright pink	red	orange	yellow	ochre	tan	dark brown	black	white	grey	light blue	turquoise	dark blue	light green	dark green
Liked	8	34*	10	14	23	3	3	1	5	37*	1	5	18	19	25*	13
Disliked	4	1	4	6	4	9	9	49*	55*	4	20*	2	1	3	0	5
For happy occasions	7	19*	19*	10	22*	1	2	2	3	41*	1	4	10	13	14	9
For sad occasions	2	6	4	1	6	7	8	32*	35*	14*	10	5	5	6	6	5
For women	11	16	27*	14	15	0	1	2	10	2	0	7	26*	18*	16	17
For men	8	7	8	6	10	4	5	6	7	56*	7	15	7*	15*	3	11
For gods	4	18	30*	41*	20	3	0	0	4	31*	1	2	4	0	3	4
For devils	5	7	5	1	5	2	3	32*	71*	10*	9	0	1	5	3	0
Total Mentions	49	118	107	93	105	29	31	124	190	195	49	40	72	79	70	64

WEST/CENTRAL

	purple	bright pink	red	orange	yellow	ochre	tan	dark brown	black	white	grey	light blue	turquoise	dark blue	light green	dark green
Liked	27*	20*	26*	17	15	1	3	2	7	18	3	6	8	18	15	12
Disliked	0	4	4	5	7	18	14	28*	37*	6	29*	10	3	2	3	4
For happy occasions	18	22*	22*	23*	18	1	3	4	3	11	3	4	7	15	11	18
For sad occasions	3	5	4	5	8	13	19*	26*	37*	5	8	9	1	8	4	4
For women	30*	35*	29	29	13	1	3	2	2	1	0	4	14	26	32*	25
For men	11	8	13	2	24*	8	7	7	12	46*	4	18*	15	15	4	7
For gods	4	12	42*	35	51*	2	2	1	13	37*	3	0	2	9	5	6
For devils	0	5	20*	13	8	3	6	24*	66*	19	3	3	1	3	6	3
Total Mentions	93	111	154	129	144	47	57	94	177	143	53	54	51	96	80	79

* The highest three scores in each of the eight categories are marked with an asterisk.

EAST

	purple	bright pink	red	orange	yellow	ochre	tan	dark brown	black	white	grey	light blue	turquoise	dark blue	light green	dark green
Liked	40*	19	25*	23	13	3	0	1	3	3	14	36*	18	18	12	12
Disliked	0	1	1	0	1	29*	10	52*	42*	8	29*	1	1	4	0	2
For happy occasions	55*	28*	31*	21	8	4	1	1	1	4	0	9	6	6	13	7
For sad occasions	0	2	0	1	0	7	6	21*	47*	62*	17	4	0	0	1	1
For women	43*	58*	42*	24	9	0	0	0	1	0	0	6	0	6	12	7
For men	2	2	2	4	1	5	1	1	5	17	11	58*	50*	36*	11	12
For gods	1	5	12*	48*	99*	2	2	1	2	11	0	2	0	0	2	0
For devils	0	2	2	3	11	3	2	32*	117*	13*	3	1	0	0	2	2
Total Mentions	141	117	115	124	142	53	22	109	218	118	74	117	75	70	53	43

* The highest three scores in each of the eight categories are marked with an asterisk.